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Company Members—More than 2000 companies hold membership either directly or by group arrangement through their respective trade associations.

Marginal Notes

A Peacetime Market—

This chubby youngster, almost as round as the easily recognized plastic sign he is holding, calls your attention to F. J. Rarig's article (page 141). When he started out to build a peacetime market in order to keep his company's war-developed plastics laboratories and production lines in

active service, Mr Rarig faced a severe handicap. Many serious fires in public places had made municipal authorities flammability conscious. And plastics had a long reputation for being highly flammable. The fact that acrylic plastics are no more combustible than wood was Mr Rarig's starting point. Mr Rarig here tells how he was able to develop his peacetime market with the backing of national groups in the building field—both those interested in fire prevention, and those representing municipalities themselves.

Gremlins at Work—

The gremlins are at it again! In presenting our story on corrosion research (STANDARDIZATION, April, page 111) we had a number of drawings and pictures of different types of ventilation ducts to play with. With great care we matched them with each other and with the text. In spite of all our care—if the duct shown in the drawing of Type II (*a*) were put in place as it is shown on page

112, the extra lining for protection against dampness would be at the top, and the bottom of the duct where moisture collects would be left unprotected. Them gremlins!

Safer Safety—

How come your March cover gal's beautiful flowing hair is unprotected from moving machinery? a CIO official has asked us. Our workwomen, he sternly says, are educated to wear caps to protect them from scalping. Meekly we explained—if you take a magnifying glass, you can see a hairnet that helps to keep this gal's hair where it belongs. However, a cap would be a more dependable protection, we agree.

ASA and Arbitration—

When the American Engineering Standards Committee (now the American Standards Association) was first set up, there was no inkling that its consensus principles might be applied to building, safety, or consumer goods. Much less did anyone visualize that standards for arbitration procedures might be considered suitable for approval as American Standard (page 144). Under ASA's Constitution, however, arbitration procedures, as well as any other methods or procedures, are eligible. Section C2.1 defines one of the objects of ASA as "To provide systematic means by which organizations concerned with standardization work may cooperate in establishing American Standards, to the end that duplication of work and the promulgation of conflicting standards may be avoided."

Our Front Cover

In the oil fields of the South, at the Okatibbee Creek Crossing, the Plantation Pipe Line Company replaces old piping . . . on this month's cover. The piping has already been welded and wrapped and is now lowered into the ditch by a side boom cat. For more about oil piping, and about other types of pressure piping, turn to page 150, Piping Under Pressure. — *Cover Photo Courtesy of Standard Oil Co. (N.J.)*

Opinions expressed by authors in STANDARDIZATION *are not necessarily those of the American Standards Association.*

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Standardization is dynamic, not static. It means not to stand still, but to move forward together.

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ASA

Reg. U. S. Pat. Off.

Ruth E. Mason, Editor Margaret Chamorel, Production Editor

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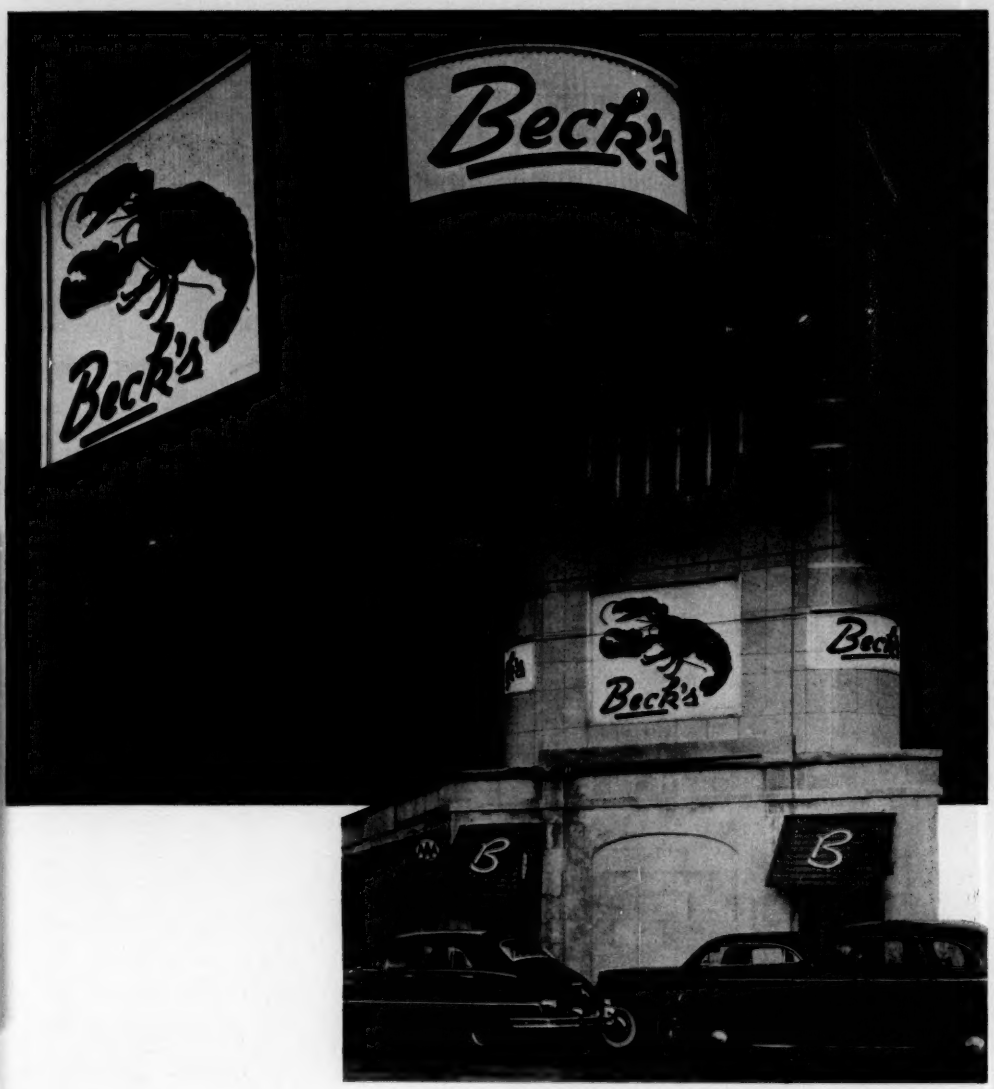


Plastics, the national war baby, has grown up. Along with GI's, plastics received an honorable discharge and has gone to work as a civilian. A spectacular use for this product has been in the advertising and trade mark field, where color, texture and lighting blend into dramatic effects both day and night.

Above is a good illustration of the decorative quality given by lighted plastics at night. The inset shows the entire building by daylight and how well the plastic signs can merge with architectural design.

Plastics — in War and Peace

by F. J. Rarig

Mr. Rarig, Assistant Secretary, Rohm & Haas Company, has taken an active part in the development of a peacetime market for his company's wartime product, Plexiglas. As a representative of the Plastics Materials Manufacturers Association, he helped to present the plastic story to both the committee on safety glazing materials for automobiles and the committee on building code requirements for signs and outdoor display structures.

Mr Rarig's interest in the strategic importance of acrylic plastic production may have been influenced by his long government service. For four years he was primarily concerned with problems of internal security and national defense on the staff of the Criminal Division of the Department of Justice. For two more years, until he joined the staff of Rohm & Haas in 1946, Mr Rarig was Chief of the Los Angeles Office of the Department of Justice's Anti-Trust Division.

ONE of the minor crises created by the precipitous disarmament of the United States after World War II was the threatened liquidation of a considerable investment in the facilities and skills used in the production of acrylic plastic. Although this material—popularly known by our trade name, Plexiglas, and by du Pont's trade name, Lucite—had been manufactured before 1939, it was pre-eminently a war baby. The wartime demand for acrylic resins in aircraft glazing and other military uses had required a thirty-fold increase in production on our part from 1939 to 1944. At war's end, there was, as far as we knew, no substantial peacetime market for Plexiglas. We believed that it was in our interest and in the interest of national defense that we continue to manufacture and improve the material. It was imperative that we develop a peacetime market if we were to maintain the skills of our production crews and to continue our research and development work.

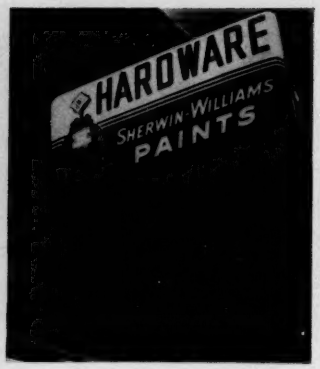
Our postwar market research revealed that a possible large-volume market for acrylic sheets existed in the electric sign field. Sign manufacturers were eager to use a weather-resistant, transparent material which could be formed into letters, decorations, and facings and then painted or silk-screened. An attempt to develop this market, however, revealed that the sign ordinance sections of municipal building codes would prohibit the use of acrylic plastic sheets in electric signs. These codes had, in most instances, been written before acrylic plastics were invented. They specified that only metal and glass or other incombustible materials could be used in electric signs.

We had read that archaic building codes were insurmountable barriers to the use of new materials. We were told that it was impossible to get the codes changed in a reasonable length of time, if at all. Rohm & Haas needed an immediate market for large-volume production, but national advertisers and national manufacturers and distributors of electric signs could not adopt for large-scale applications a sign medium which was not approved under the building codes of the thousands of municipalities where signs might be installed.

Under these circumstances, our first responsibility was to ascertain possible hazards involved in this proposed use of acrylic plastics, which are classified by Underwriters' Laboratories as a slow-burning plastic material. We retained Underwriters' Laboratories to make an analysis of the use of Plexiglas in the letters, decorations, and facings of electric signs. Their completely favorable report encouraged us to call on building officials in some of the larger cities. These officials were most considerate, but it was obvious that without expert assistance or guidance their overburdened staffs would be

Rohm & Haas Co.

The cockpit of the "Banshee"—Navy, carrier-based, twin-jet fighter—is enclosed with a single formed sheet of plastic which permits unobstructed vision.



Rohm & Haas Co.

Changes in building codes have permitted the use of acrylic plastics in a wide variety of signs:

Above, red letters of plastic are mounted on translucent plastic to identify an Esso Service Station. At night the sign is lighted from the interior.

Above right, a company gives its dealers interior lighted signs with color and copy silk screened on the inside of single sheets of plastic. The upper half of the sign may be used by the dealer for his name or other advertisement.

At the right, a traffic sign is silk screened on a luminous plastic sheet, which has been dropped for access to cold cathode lighting. Below, the 5½-foot-high letters, interior-lighted with neon, are faced with corrugated, translucent, red plastic, which gives them an especially dramatic impact at night.

extremely slow in processing applications for building code amendments to permit the use of Plexiglas in electric signs.

ASA Committee

In the course of these discussions, our attention was called by several building officials to the existence of American Standards Association's Building Code Correlating Committee. This committee has supervision of the projects which, under American Standards Association procedure, are developing standards on subjects normally covered by building codes. One of these projects covered signs and outdoor display structures. This committee is sponsored by the American Municipal Association and the Outdoor Advertising Association of America. Mr William F. Hurd, Consulting Engineer of General Outdoor Advertising Company is chairman of the committee.

We immediately applied for permission to appear before the sectional committee on signs and outdoor displays to present our problem. The committee gave us ample time to make a complete presentation of the required data. A basic purpose of ASA is to provide a forum to facilitate change, while, at the same time, reconciling it with the established standards of industrial and public safety.

To the sectional committee, this presentation for approval of an entirely new type of building material posed a real challenge.

After exhaustive investigation by the committee, slow-burning plastics were accepted as an approved material for the manufacture of letters, decorations, and facings of outdoor signs and displays. In the model code, which the committee drafted, approved combustible plastics were defined by reference to established American Society for Testing Materials standards, and their use in electric signs was limited according to an area limitations formula submitted by representatives of the National Fire Protection Association. To insure against the use of unapproved materials, the code provided that applications for permits to erect signs

utilizing plastic parts must describe the plastic material and certify that it is an approved combustible plastic within the meaning of the code; and the code also provided that such plastic parts should be identified either with the trade name or the popular name of the plastic used.

National Appeal

Fortified by this ASA approval and subsequent acceptance by Building Officials Conference of America, and equipped with Underwriters Laboratories' reports showing safe methods of installation, we appealed to building code officials throughout the country to revise building code standards for electric signs along the lines established in the American Standard. It has been my personal responsibility to petition administrative agencies and legislative agencies in municipalities throughout the United States for acceptance of acrylic plastics as an approved sign medium. In city after city, the officials have received our data, frequently supplemented it by independent laboratory tests, and approved the use of acrylic plastics according to the formula established by the American Standard.

We were told, before launching this program, that it would take from ten to fifteen years to make any progress. Our experience belied this pessimistic prediction. Although acrylic plastics have not been universally accepted as an approved sign medium, the acceptance within a period of two years has been so general that the material is now established as one of the basic fabricating materials of the sign industry. I credit the American Standard with having led the way in this program of acceptance by regulatory authorities.

Second only in importance to speedy acceptance has been the uniformity of the regulatory provisions accepted as reasonable by public officials. Here again, much of the credit for uniformity must be given to the existence of an American Standard. This uniformity is of inestimable importance in an industry such as the sign industry which is truly national in scope. Major oil companies and beverage manufacturers, for example, have standard signs featuring colorful trade-marks. These are usually contracted for on a quantity basis for distribution to stores and agencies located in cities, towns, and hamlets all over the United States. Such a sign must be designed to conform to code regulations throughout the country. It was, therefore, imperative that the statutory formula for the control of acrylic plastics be uniform.

Rohm & Haas Co.

Letters of acrylic plastic, formed in a mold, are being removed prior to being cut, polished, and assembled into words for a sign.

Anyone familiar with building codes knows that there are almost infinite possibilities for honest disagreement as to the best approach to be used in controlling the use of a building or decorative material. It is a real tribute to the American Standards Association that its procedures are such that standards developed and approved under them as American Standard have a validity and prestige which permits of their universal use. In this case, the area limitations formula and other requirements governing the use of acrylic plastics in signs have been adopted by virtually all of the cities which have approved the use of acrylic plastics in electric signs.

Now, the United States is once again engaged in a tremendous rearmament program. The goal of our Armed Forces is again fifty thousand military planes. Thanks to a peacetime market, in part made possible by the imaginative and progressive attitude of America's building officials and the constructive leadership of ASA, we now have available production capacity and the skill with which to produce an improved acrylic sheet for these aircraft. We can, without delay, supply the requirements of our air force for tremendous quantities of huge acrylic plastic sheets capable of meeting the demands of jet planes. These modern aircraft fly at almost twice the speed of the aircraft of World War II and at altitudes which subject their huge acrylic canopies to tremendous strain.

We are proud of what we are now able to do, but we gratefully recognize that our ability is in no small part a result of the availability of ASA's procedure and the progressive understanding and cooperative attitude of building code officials throughout the United States. Local building codes may in some instances be insurmountable barriers to new materials, but our experience shows that a decentralized system of local governments can respond to the demands of our national economy when guided by a national standard arrived at democratically.

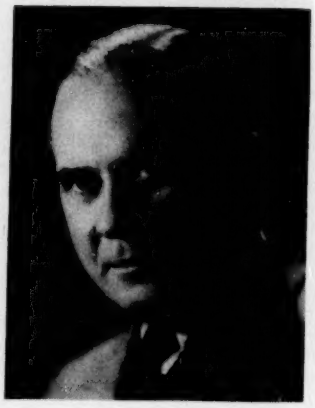
"Standard" Arbitration
What It Is and What It Does

by Thomas A. Morgan

Chairman of the Board and President, The Sperry Corporation

Mr Morgan's experience as director of many of the outstanding companies and national groups in the United States gives him authority to speak on a technique for settling disputes—arbitration. He is chairman of the Board, President, and Director of the Sperry Corporation. He is also chairman of the Board and Director of Vickers, Incorporated; the Wheeler Insulated Wire Company, Inc; New Holland Machine Company; and the Sperry Gyroscope Company of Canada, Ltd. In addition, he is a director of the United Negro College Fund, Inc; the American Arbitration Association; the Bankers Trust Company; the Centennial Insurance Company; the N. C. Engineering Foundation, Inc; Shell Oil Company; the Lehman Corporation; the Sperry Gyroscope Company, Ltd; the Western Union Telegraph Company; and the Wright Machinery Company. Mr Morgan is a member of the Board of Trustees of the Atlantic Mutual Insurance Company and the National Safety Council.

In addition to these heavy responsibilities, Mr Morgan is a member of many of the leading technical, economic, and social groups in the country. These include the American Ordnance Association, the Aviation Executive Club, the Chamber of Commerce of the State of New York and the Chamber of Commerce of the U. S.; the Economic Club of New York; the Institute of the Aeronautical Sciences; National Aeronautic Association; the National Air Council; Newcomen Society of England; the Pan American Society of the U. S.; and the United States Naval Institute.



IN a world torn with dissension, distrust, and conflict, American arbitration has marched steadily toward its goal—the amicable settlement of disputes and differences. Great as are the remaining differences, on at least one continent of the world there is unity for the defense of democratic institutions through this most democratic of processes, arbitration.

Arbitration began in 1787 when the Chamber of Commerce of the State of New York set up the first privately administered tribunal of business men and became the first administrator of arbitrations. Since that time, more than 500 American trade and commercial organizations have settled their differences by arbitration. Among them, the New York Stock Exchange requires its members to arbitrate all disputes arising between members. The great American textile industry, including cotton, wool, silk and rayon, submits all of its disputes to arbitration. The building and construction industries, through the Institute of Architects, the Building Congress, and Contractors Associations settle their disputes by arbitration. Many union contracts—in fact, two-thirds of them—require management-labor disputes be submitted to arbitration, when all other amicable methods fail.

It remained, however, for the American Arbitration Association to gather up all the loose strands of arbitration and unite them into a national system, serving all of these independent groups, and operating as a laboratory of experiment and experience for the advancement of arbitration as an American way of life and of thought. Out of the 50,000 or more disputes settled in its tribunals, representing all types of business and industrial problems, there has emerged standard arbitration that is coming to be known the world over for its integrity, competence, speed, and economy.

It is timely, therefore, to inquire: What is this standard arbitration? How was it established and how did it become acceptable in practice? How far may standardization be carried without impairing the freedom of the individual to settle his controversies by a method of his own choice and by means of judges whom he chooses?

In standard arbitration, the specifications are set by rules of procedure and are observed through the good faith of the parties or by trade discipline. The standard arbitration is processed under rules, in tribunals that are privately established and maintained by commercial and financial institutions. They offer excellent

examples of the self-discipline and self-help which industry supplies voluntarily in the maintenance of commercial and industrial peace.

A standard arbitration is one where the participants are reasonably certain that whatever the subject matter, and wherever the arbitration is held, certain basic principles or procedural ingredients will remain constant. It is an arbitration where the variants in procedure or practice are reduced to a minimum, thereby relieving parties of the hazards of uncertainties, delays, high costs, or frustration in obtaining a settlement. A standard arbitration is one where the principles and procedures are fixed in advance and continue without change or interruption by common acceptance usage for the settlement of the type of dispute to which they are adapted.

The standard arbitration is fixed by rules and not by law. It is based upon the experience and research of the group that prescribes the specifications. It is intimately related to the customs of the trade and often grows out of their necessities. Such, for example, are the arbitration involved in a comparison of samples with shipments when questions of quality are involved. But arbitrations need not necessarily be restricted to a trade. They may be fixed by general rules which apply to all types of controversy. Such, for example, are those established by the Rules of the American Arbitration Association and under its Code of Ethics and Procedural Standards for Labor-Management Arbitration.

The American Arbitration Association has submitted its standards for commercial arbitration to the American Standards Association for approval. These standards are in three parts—standards for arbitrators, standards for the parties in dispute, and standards for arbitration administrators. They represent the experience not only of the American Arbitration Association but also of the Inter-American Commercial Arbitration Commission and the Canadian-American Comercial Arbitration Commission.

Standards are needed to avoid duplication, conflict, and confusion as to what each participant should do in processing a case, the Association explains. Participants differ greatly in background and experience. New trade programs offer new problems; arbitrators are drawn from all walks of life; and both parties and arbitrators are often inexperienced in arbitration. Standards offer a guide to avoid difficulties from lack of experience.

"We believe closer cooperation between those engaged in standardization and those engaged in arbitration will be fruitful," the Association declares. "As has been pointed out in ASA literature, 'one of the chief functions of standards is to remove conditions which lead to controversy.' The purpose of arbitration is to settle controversies when they do occur."

Acceptance of a standard arbitration, established by rules, is voluntary. Members of trade organizations voluntarily accept it when they use the uniform contract of the trade containing an arbitration clause which refers to specific rules. Disputants generally accept the standard arbitration set by the American Arbitration Association when they refer matters to arbitration in accordance with its Rules. A standard arbitration is, therefore, accepted not only through reference under rules but by means of written contracts which name all of those rules.

How and why has a standard arbitration become necessary in modern business transactions and in present day labor-management relations? In its early history, when parties engaged in business knew each other personally and had direct contact, the hazards of disputes were less acute. So, also, the references to arbitration were more casual and intermittent. The issues were simpler, being confined in many instances to questions of price, quality, or time of delivery or condition upon arrival.

These Men Are Typical Arbitrators.

George H. Sibley
Vice President, General Attorney and Director of E. R. Squibb and Sons

Sidney J. Weinberg
Special Assistant to Charles E. Wilson, Defense Mobilization Director

Donald G. Mitchel
President
Sylvania Electric Products, Inc.

Thomas J. Watson
Chairman of the Board
International Business Machine Corp.

American Arbitration Association

In a case where a housewife claimed her rug had been damaged when cleaned, rug experts were called in to serve as arbitrators.

Arbitrators, chosen by the parties, were usually friends or known business associates whose experience and competence could be gaged in making their selection.

Today, this is changed. The written contract passing between men unknown to each other has replaced the verbal order. The uniform contract, found best adapted to a trade, has replaced the haphazard instrument drawn at random. The insertion of arbitration clauses in these contracts brings arbitration into constant and steady usage in place of intermittent references. The issues referred to arbitration have greatly expanded in kind and complexity. And arbitrators are frequently unknown men chosen from panels, instead of from a narrow circle of friends of the parties.

A Standard Necessary

The wide acceptance of the practice of committing contracting parties to the arbitration of future disputes that may arise under the contract, at the time of making it, and when a dispute does not seem imminent, has made a standard arbitration not only possible but necessary. Owing to the frequent use of uniform contracts containing arbitration clauses, arbitration has become big business. It is fair to the lawyer and to the arbitrator; it is economical and time-saving to the parties; it is essential to business operation generally and as such necessitates standardization.

No less profound changes have occurred in the field of labor relations. Not many years ago, an arbitration clause in a collective bargaining agreement was a novelty; the use of rules was thought inappropriate and the partisan arbitrator chosen as an advocate, with only one member of the board a neutral, was thought ideal for bargaining purposes. Today, two-thirds of the recorded collective bargaining agreements contain arbitration provisions, references to rules are increasingly frequent, and the tri-partite board is no longer the unquestioned best method of proceeding. The trend toward standardization is unmistakable, for labor arbitrations are now also big business.

What are the elements or processes of arbitration that rules or codes seek to standardize? Of first importance is time. Without fixed periods of time within which arbitrators are to be appointed, hearings arranged, notices issued, and awards made, just to mention a few of the items of time, any arbitration may be frustrated through negligence, evasion, or default on the part of a party who is reluctant to proceed under the contractual obligation to arbitrate. It is, therefore, important to ascertain what is "reasonable" or "due notice", how much time should be allowed for certain obligations to be performed and to fix definite periods of time that permit of no equivocation. Failing their observance, alternate methods of procedure must be provided, subject also to standardization of periods of time within which performance is required. An examination of types of rules indicates that fixing periods of time has become one of the most important elements of standardization.

Of hardly less importance is the standardization of the order of the proceeding. It has been found that a smooth-running arbitration requires that consecutive steps be taken, in accordance with a pattern. It has become apparent that certain practices are identified with the initiation of an arbitration, that others are essential to the appointment af arbitrators, and that still others are necessary to the arrangement of hearings and getting the matter properly before the arbitrators. If these steps be taken out of order, or by too divergent methods, confusion or frustration result. Hence, rules provide for an orderly procedure that leaves no loopholes for escape from the consequences of commitments to arbitrate.

Terms Clarified

Perhaps we should go back a moment and examine the terms used in arbitration and see to what extent standardization can or has taken the confusion out of their usage. Time was (and still is in labor arbitration) when any form of pacific settlement was called arbitration, when any kind of compromise or recommendation was termed an award and when the arbitration agreement was a hazy instrument. The arbitrator himself might be a mediator, conciliator, negotiator, or a combination of all three. The standard arbitration has clarified these terms. Under rules that undertake such clarification, the arbitrator is appointed to make a final decision on the merits of the case, according to the facts or testimony presented, and his findings are in final written form which the parties agree in advance to accept. His is a judicial not a bargaining function

and his brethren in arbitration tend to regard the arbitrator who acts otherwise as not maintaining the prestige and integrity of arbitration.

Rules Synchronized

The synchronization of rules is a further undertaken in standardization. For example, in the commodity exchanges belonging to the British Federation of Commodity Associations while each commodity group operates separately for its own trade under a uniform contract, the arbitration procedures are startlingly alike. As a further illustration, the Rules of the American Arbitration Association, the Inter-American Commercial Arbitration Commission, and the Canadian-American Commercial Arbitration Commission have been so synchronized as to be interchangeable in principle and process. In whatever country the party arbitrates, under whichever rules he selects, he is assured of similar guaranties. In the United States thousands of arbitrators in hundreds of communities apply rules, with a minimum of variants, whether the issue involves a commercial, civil, or labor dispute. In no other country has such progress been made in the standardization of the practice generally of arbitration.

Not so very long ago, it was thought that the utmost freedom should be allowed parties in making an arbitration agreement, that its form was immaterial, and that it required great flexibility. It used to be that submissions to arbitrate were carelessly written on backs of envelopes or on scraps of paper and were indifferently signed by the parties. Notices used to be given by telephone or other casual communication. Written demands under clauses, stating the issues, were unknown; awards were issued haphazardly or orally. It was all delightfully informal, but hazardous, because under attack in the courts, the loose ends frayed out. The opportunities for evasions and frustrations have convinced parties that standard forms of agreement or standard forms of clauses that contain the essentials but no surplusage, offer

N..Y. Herald Tribune

Last October, six leading Japanese jurists extended their studies of the American judicial system to include arbitration methods as well.

greater security of performance.

Today, printed forms, containing specific data and requirements, are widely in use and give uniformity, certainty, and surety to the proceeding. Use of them saves parties and arbitrators worry, time, and economic loss. Twelve standard forms in use by the American Arbitration Association have systematized a proceeding without in the least affecting adversely its flexibility, speed or low cost.

Cost Rates Set

At first glance, it seems impossible, if not impracticable, to standardize the cost of an arbitration as there are so many imponderables in the situation. Nevertheless, progress has been made in sufficient degree to demonstrate its feasibility. The American Arbitration Association has found it possible to set a limit on arbitrators' fees, to regulate expense accounts, to set rates for mileage and hotel charges, to keep stenographic rates within bounds, and in other ways to begin the standardization of costs.

The foregoing offer illustrations of some of the procedural processes that lend themselves somewhat readily to standardization. It is in the field of behavior that the real difficulty arises, for here no norm has been established to which to key specific standards. What, for example, should be the requirements for admission to a panel of an arbitrator? Setting a standard involves questions of character, of competence, of experience, of attainments in public or private service. How shall these be reduced to operating terms to determine if a person should be appointed to a panel?

Consideration also is required, according to a fundamental principle of arbitration, that the arbitrator be impartial. This implies not only unbiased action in an individual case, but that he has a tolerant and open mind and one not given to prejudice or preconceived opinions. But how determine this in estimating his fitness for a panel? The American Arbitration Association has undertaken to establish standards for admission to its Panel, but is far from being satisfied that they are sufficiently scientific to assure the desired result in every case.

Essentials Specified

Commercial arbitration is far in advance of labor arbitration. It is possible to draw commercial arbitration rules to uniform specifications and to have them incorporate basic requirements for operational efficiency. They recognize that unless certain essentials are included in the specifications, an arbitration may fail in its functioning even as a machine

may fail if its basic specifications are neglected. These specifications are set by technical experts who, out of their knowledge and experience, know the requirements. It is possible to set commercial qualifications by trade or callings and to find experts to fill these requirements. There is considerable agreement upon who can qualify as experts in these categories. It is possible to find agreement upon who are the outstanding leaders in any given field of industry or in a profession.

But where is the agreement upon what constitutes a good labor-management arbitrator? What qualifications should he have to admit him to a panel? There is wide divergence upon the advantages of having rules of procedure for labor arbitrations. One school of thought holds that he should be a chameleon, having power to change from mediator to conciliator or arbitrator as circumstances seem to require and that rules cramp this facility. Many collective bargaining agreements include, in the name of arbitration, provisions that provide only for fact-finding or recommendations, or that favor the exhaustion of every other remedy before arbitration is applicable. Some agreements neglect wholly to provide for arbitration under Rules. And yet just as surely as commercial arbitrations have moved over the centuries toward standardization, labor arbitrations are following the same pattern, for only in that pattern lies security of performance.

It is, however, in the field of human behavior during an arbitration that the task of standardization becomes really intricate. For here the problem becomes one of furnishing a guide for conduct. The principle says that the arbitrator shall be impartial and that he must decide according to his conscience. But in the heat of argument, in the presence of conflicting testimony, incomplete records and defective memories and competitive tactics, how shall the arbitrator be sure of his impartiality and that his conscience is freely at work? And sometimes the parties seek to confuse rather than to help him.

Nothing daunted, however, a group of more than 100 industrialists and professional men, two years ago, tackled the problem of human behavior in labor arbitrations and a

(*Continued on page* 155)

Economic Cooperation Association Honors ASA

A CERTIFICATE of Cooperation was presented to the American Standards Association by the Economic Cooperation Administration at the spring meeting of ASA's Board of Directors. This award was presented to Thomas D. Jolly, vice-president of the Aluminum Company of America, Pittsburgh, and president of ASA, by the Honorable Walter T. Shirley, Commissioner of Commerce of the City of New York, on behalf of William C. Foster, administrator of ECA.

The certificate was given in recognition of ASA's assistance and cooperation in helping technical missions from overseas coming to this country to study U.S. standardization and simplification practices and techniques. Through its broad connections as the national clearinghouse for standards, ASA has arranged plant visits and conferences for these missions in order that they could get a first-hand working knowledge of American standardization methods.

ASA has received delegations representing management, labor, and government from the United Kingdom, Sweden, Greece, the Netherlands, and will soon meet with the French. These groups have shown particular interest in American simplification techniques and in the use of standards as a means of increasing over-all production of essential goods.

Acme Newspictures

Thomas D. Jolly receiving ECA award on behalf of ASA for cooperation with technical missions from overseas in their studies of standardization.

In accepting the award on behalf of ASA Mr Jolly stated, "Standardization is fundamental to productive capacity, savings, and efficiency. New methods are broadening the application of standardization management and engineering technique. By sharing the lessons we have learned, the ASA, its members, and affiliated groups have been privileged to take an active part in contributing to the recovery and stability of our international partners. The ASA wishes to express its deep appreciation to the ECA for this award."

National Production Authority Activities

Releases from the National Production Authority indicate an increasing interest in standardization and simplification as a means of conservation. The following have come to the attention of ASA during the past month:

Paper—

A five-man task group has been appointed to study standardization, need for a paper conservation order, and possible manpower problems.

Glassware—

Costs have increased as much as 30 to 40 percent on a single glassware article because of the inability to use standardized packaging. Breakage resulting from extra handling has become a serious problem, industry representatives stated, because their factories are not generally equipped for storage.

Chinaware—

A three-man task group has been named to study the need for raw materials for chinaware manufacture and to plan possible conservation measures.

Blueprint and Photographic Reproduction Equipment—

NPA appointed a six-man task group to study conservation and substitution of critical materials, manpower and materials problems, and to report on current production facilities and possible expansion of capacity within those facilities.

Steel Plate—

Certain strip mills are not equipped to shear the long edges of their plate product and therefore must be allowed to furnish the excess material involved in mill edge plates, and the fabricator must, under such circumstances, arrange for the removal of the excess down to the required width on his own facilities, NPA officials told the Steel Plate Industry Advisory Committee. In certain other instances, strip mills will be unable to meet established plate mill shearing and camber tolerances, and in such cases fabricators should waive standard tolerances and accept the product of these mills, NPA representatives declared.

Strip mill plates generally will not meet transverse test requirements of many plate specifications and, whenever possible, specifications should be modified to omit this requirement, they advised.

Fabricators frequently order stock material in large sizes, eventually cutting the material into smaller sizes. NPA officials recommended that contractors and fabricators re-examine the size specifications in order to come within strip mill sizes.

The Steel Plate Advisory Committee recommended that the National Production Authority examine with the Bureau of Standards or other appropriate Government agency the desirability of standardization of plate gages with the idea of putting it into effect at the earliest possible moment. Such standardization, it was pointed out, would conserve steel and avoid certain production difficulties.

Builders Hardware—

Recommendations of 15 task groups appointed after a meeting of the advisory committee January 26 have been received and will be given full consideration in the preparation of any conservation order approved by the National Production Authority, according to the announcements received from NPA.

Industry representatives agreed with NPA that simplification is necessary to insure supplies of scarce metals for defense and defense-supporting activities, and that an order to make such conservation effective would receive the industry's approval.

Recommendations submitted by the task groups indicate that the builders' hardware industry is prepared to make substantial sacrifices in simplifying their products, NPA said. One manufacturer announced his company would reduce the number of their products from 2,600 items to 375. Others are contemplating similar action in the interest of conservation for the defense effort.

Electronics—

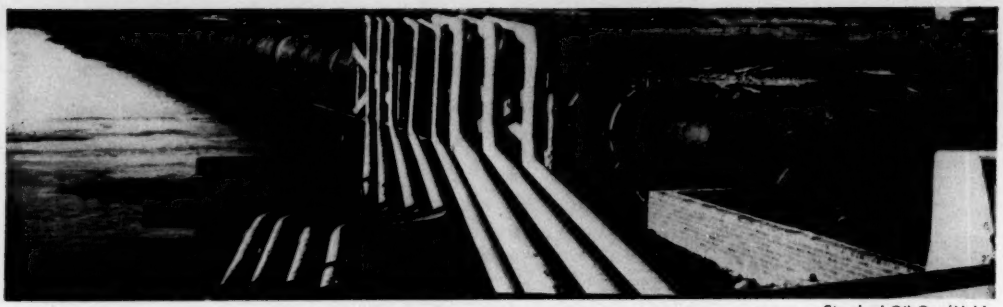
NPA urged that conservation and salvage measures be instituted to reclaim and save vital materials, and appointed a five-man task group to study simplification and standardization, as well as a possible repair parts program.

Milk Bottle Crates—

NPA officials suggested that the industry attempt to simplify and standardize their product in order to conserve materials in short supply. Committee members replied that they standardized their crates during the World War II conservation program and did not change after the war because of the shortage of some steel products. This, they said, eliminated the possibility of any additional great savings.

Rubber—

Industry representatives suggested that scarce styrene, used in making synthetic rubber, could be saved if the number of types of synthetic was reduced and certain formula changes made. NPA pointed out that the plastics industry, including many small operators, is in a difficult situation because of the shortage of styrene. Officials of the Office of Rubber Reserve, which operates the Government-owned rubber plants, agreed to spearhead a simplification program to save styrene.



Standard Oil Co (N.J.)

Piping Under Pressure

Editor's Note:—*Preparation of this article was made possible through the cooperation and assistance of officers and members of Committee B31; particularly F. S. G. Williams, chairman; Sabin Crocker, vice-chairman; L. W. Benoit, secretary; H. D. Hancock; and A. C. Buensod.*

NEWSPAPERS reported last month that Connecticut property owners were protesting the installation of pipe lines carrying natural gas to nearby communities. Their protests were attributed largely to the fear that high pressures under which gas is run through the pipes might prove dangerous to the community.

Whether or not the Connecticut residents were justified in their complaints, this type of hazard is only one of the problems taken into consideration in the new edition of the American Standard Code for Pressure Piping.

The 1951 edition, just published, was prepared by a widely representative committee, sponsored by the American Society of Mechanical Engineers under ASA procedures. It is a standard of minimum safety requirements for the various piping systems that carry liquids or gases at high pressures—from the relatively tiny piping systems that operate delicate instruments, to the huge pipe lines that carry oil or gas for thousands of miles across the country. It is intended as a guide in selecting materials that will safely withstand the pressures and temperatures under which the various piping systems are operated; in designating dimensions; in design and erection; and in testing the elements that make up a piping system as well as the completed system itself.

Since the first edition of the Code was published in 1935, industrial practice has changed considerably. New materials and new alloys have been developed in the past few years that make it possible to use higher temperatures under pressure than had been possible before.

Twenty years ago, pipe carrying steam for power was designed for pressures of from 200 to 600 pounds per square inch and superheated steam temperatures not in excess of 750 F; as recently as 1942, the highest commercial temperature was 925 F. Today, many large power piping systems are designed to carry steam at 1,500 to 2,000 pounds per square inch and 1,000 to 1,100 F temperature. When they can be carried safely, these higher temperatures and pressures are of great significance to industry since they make it possible to generate electrical energy with more economical use of fuel.

The 1951 edition takes cognizance of these changes by including refer-

Officers responsible for the work of Sectional Committee B31 on Code for Pressure Piping, and Chairmen of the subcommittees that prepared the individual sections of the Code are:

F. S. G. Williams, manager, Engineering Standards, Taylor Forge and Pipe Works, *Chairman*

Sabin Crocker, mechanical engineer, Ebasco Services, Inc., *Vice-Chairman*

L. W. Benoit, general secretary, Manufacturers Standardization Society of the Valve and Fittings Industry, *Secretary*

Subcommittee 1 on Power Piping Section—E. J. Wisemann, mechanical engineer, Stone and Webster Engineering Corp.

Subcommittee 2 on Gas and Air Piping Section—H. D. Hancock, president, Gas Advisers, Inc.

Subcommittee 3 on Oil Piping Section—R. D. Lepley, engineer in charge of technical div, Atlantic Refining Co.

Subcommittee 4 on District Heating Piping Systems Section—G. D. Winans, assistant superintendent of central heating, Detroit Edison So.

Subcommittee 5 on Refrigerating Piping Section—A. C. Buensod, president, Buensod-Stacey, Inc.

Subcommittee 6 on Fabrication Section—G. Sindig-Larsen, vice-president, Pittsburgh Piping and Equipment Co.

Subcommittee 7 on Coordination (Editing and Interpretations)—H. A. Wagner, chief mechanical engineer, engineering dept, Detroit Edison Co.

Subcommittee 8 on Materials and Stresses—J. J. Kanter, materials research engineer, Crane Co.

Subcommittee 9 on Standards and Identification—L. W. Kattelle, assistant chief engineer, Walworth Co.

Subcommittee 10 on Instrument Piping—R. E. Sprenkle, hydraulic engineer, Bailey Meter Co.

Subcommittee 11 on Liaison with Other Codes and Standards—C. A. Kelting, assistant division engineer, Consolidated Edison Co. of New York.

ences to recent editions of standards developed by the American Society for Testing Materials for new types of materials and alloys.

Changes in Section 1 on Power Piping, for example, have been made to include ASTM specifications for materials developed for high temperature service since 1942. These include seamless 1 percent chromium, 0.5 percent molybdenum alloy steel pipe, ASTM A 315; and pipe similar to Grades T-21 and T-22 alloy steel superheated tubes. New specifications included for other purposes are: heat treated carbon steel bolting material, ASTM A 261; Grade B steel machine bolts, nuts, and tap bolts, ASTM A 307 (a new specification similar to MSS SP-39); copper and copper alloy seamless tubes and ferrule stock, ASTM B 111.

In addition to minimum requirements for the different types of piping systems—power, gas and air, oil, district heating, refrigeration—comprehensive requirements are included for fabrication of the piping components and systems. Minimum requirements also are provided for the construction of pipe hangers and anchors for these systems. These outline approved methods of providing for the thermal expansion of piping and for the flexibility of piping systems. They tell how parts should be prepared for welding, and how welded pipe joints should be made and tested, and they tell how to test welding processes and operations. They also tell how to fabricate and weld branch connections, and how to fabricate pipe joints other than welded joints.

Since welding procedures and the qualification of operators for welding pipe joints are in accordance with the ASME Boiler Code, a copy of Section IX of the Boiler Code is enclosed as an insert inside the back cover of each copy of the Code.

Power Piping—

Minimum safety standards for all the component parts of piping systems carrying steam, water, and oil, as well as for the system itself, are outlined in Section 1. These parts include the pipe, flanges, bolting, gaskets, valves, and fittings.

The ASME Code for Power Boilers governs piping coming under Boiler Code jurisdiction wherever the Boiler Code requirements exceed corresponding requirements of the Pressure Piping Code. Specifications for materials listed in Table 1 have been brought up to date by the addition of specifications completed since 1942. The maximum limiting temperature at which these materials may be used for power piping has been raised from 1,000 to 1,100 F. Values for allowable stresses (S values) as shown in the ASME Boiler Code have been added for materials used at 1,050 F and 1,100 F.

A warning is sounded against the danger of graphitization of welded joints through prolonged exposure to higher temperatures than are suitable to that particular material. Experience has shown that severe shock in a piping system may pull a welded joint apart if extensive graphitization has taken place. The Code cautions, therefore, that where welded construction is used, graphitization may occur if carbon steel should be subjected over a long period of time to temperatures in excess of 775 F; carbon-molybdenum steel to temperatures in excess of 875 F; and chromium-molybdenum steel, with chromium under 0.60 percent, to temperatures in excess of 975 F.

Before erection, steel fittings and valves must be capable of withstanding the hydrostatic test pressures given in Supplement No. 1 to the American Standard for Steel Pipe Flanges and Flanged Fittings (B16e).

To assure safety, a hydrostatic test is to be applied after erection wherever practicable.

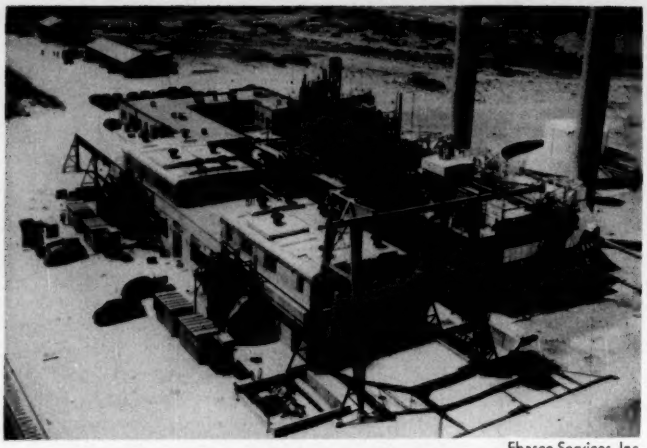
Gas and Air Piping—

In 1942, when the edition preceding the 1951 edition of the Code for Pressure Piping was published, the largest heavy-duty cross country gas piplines were 20 to 24 inches in diameter and were operated at pressures usually in the range of 700 to 900 psi or less. Since that time the Federal Power Commission has issued certificates for nearly 34,000 miles of transmission lines including the new long distance lines extending from southwestern producing fields to eastern consuming areas.

Several of the recently installed heavy duty lines were 30 inches in diameter, and a 34-inch diameter line is now under construction. Steady improvement in materials has made it possible to increase the unit working stresses in pipe walls, thus permitting increase in pipe diameter for a given wall thickness without a corresponding decrease in gas pressures. Not only is the greatly enlarged volume of gas transported an economically significant item, but it is estimated that the now more efficient use of

Consolidated Edison Co.

Gas mains, exposed here in preparation for more subsurface construction, form a part of the intricate piping system under the streets of New York City.



Ebasco Services, Inc.

The Permian Basin Station of the Texas Electric Service Company, an "outdoor" power station, shows the piping of four units, each having a capacity of 13,000 kw.

steel makes it possible to save as much as 100,000 tons of steel on one cross country pipeline alone.

The Code for Pressure Piping has played an important role in the extension of gas as an economical fuel to large population centers. An experience in Michigan in 1949 offers an example. Country property owners protested the installation of a gas pipe line on the ground that it would be unsafe. An investigation by the State Public Utility Commission, conducted under the direction of members of the University of Michigan faculty, put the pipe through severe tests, and proved to the satisfaction of the Commission that pipe meeting the requirements of the Code would be safe. The Michigan Commission is only one of the regulatory groups that has ordered that gas pipe lines follow the requirements of the Code for Pressure Piping.

According to representatives of Subcommittee 2 which is responsible for this section, the gas industry is interested in the Code because it provides realistic minimum construction requirements and offers the basis for a program of self-regulation in matters of safety.

The minimum safety requirements outlined in this section not only apply to cross country gas transportation systems but to distribution systems in cities, and to gas and air piping in compressing stations, mines, and in power, industrial, and gas manufacturing plants. These piping systems are classified in two divisions. Division 1 covers gas distribution and certain other gas and air piping systems, and Division 2 covers cross country transportation systems, including compressing stations.

Development of new specifications for materials has been recognized by eliminating some of those formerly in effect and substituting new ASTM and API specifications now in general use.

Important changes have been made in provisions relating to the joint efficiency of the mill welds in the various classes of welded pipe.

New requirements have been included for pipe (except cast iron pipe) in gas and air compressing station piping systems. These will result in somewhat thicker pipe walls, other factors being equal, than previously required for compressing station piping.

Oil Piping Systems—

The huge pipe lines carrying oil from refinery to market, as well as piping used in refineries, in blending and compounding plants, terminals, and gas processing plants are covered in this section. These minimum safety requirements and recommended practices apply to component parts but not to crude oil gathering systems in oil fields unless they are in developed residential, business, or industrial areas of cities or villages. Pipe and tubing used in gas or oil wells or in the tanks and lines used in production of crude oil are not included.

Because an accident in a crowded city or factory offers an entirely different degree of hazard from one in an open field the piping systems covered by this section have been classified into two divisions. Division A includes all oil piping systems except oil transmission lines outside of cities and villages; Division B includes field transmission lines.

All requirements of the Code apply to both divisions unless specifically stated. For example, more elaborate testing requirements are involved in Division A piping than in Division B.

The modified Lamé formula, used in other sections of the Code is now being used in this section as the primary basis formula for determining all thickness of pipe.

Tables of pressure-temperature ratings have been revised to bring them in line with new pressure-temperature ratings in 1949 supplement to A-S Steel Pipe Flanges and Flanged Fittings, B16e-1939.

Allowable stresses have been added in tables for new types of pipe.

One important change has been made to prevent possible accidents through restrictions in the use of block valves. Now block valves may be used for inspection and test of relief valves only as permitted by the API-ASME Code for Unfired Pressure Vessels or ASME Unfired Pressure Vessel Code.

Refrigeration Piping—

In the decade from 1940 to 1950, manufacturers' shipments of refrigeration and air conditioning equipment increased from $306 million to nearly $640 million. This figure, representing almost double the volume, is exclusive of household refrigerators and home freezers. At the same time, a number of new refrigerants came into use.

This widely increased use of refrigeration and air conditioning for preserving food, for comfort in of-

fice buildings, for control of temperatures in laboratories and in precise manufacturing processes, emphasized the importance of bringing up to date the minimum requirements for refrigeration piping in the new edition of the Code for Pressure Piping.

The Refrigeration Section of the Code covers the design, manufacture, and installation of piping systems and component parts, including flanges, bolting, gaskets, valves, and fittings for refrigerants and brines. Testing and safety precautions for the use of refrigerating systems are covered in the American Standard Safety Code for Mechanical Refrigeration, B9.1-1950.

Minimum design pressures for refrigerant piping with all the presently known refrigerants listed are contained in the Refrigeration Section of the Piping Code. For refrigerants not listed, provision is made for calculating the minimum pressures suitable for the refrigerant to be used.

The Code contains all the approved standard materials specifications, also a table covering stress values for use in pipe and tubing.

A formula is provided for figuring the pipe wall thickness using the stress values as given in the table for the material to be used, all subject to the specific minimum thickness requirements stated in the Code. This is in conformity with the same provisions contained in the American Standard Safety Code for Mechanical Refrigeration, B9.1-1950.

Instrument Piping—

It is just as important that piping connecting the main piplines with instruments, such as pressure gages and flow meters, meet approved minimum requirements as that the main pipe line meet such requirements. To assure that instrument piping will come up to the same standard as the main line, requirements for instrument piping are included in each of the main sections of the Code.

Since there are no general standards for the tube fittings used with instrument piping, an appendix describes the various types of fittings permitted for use with instrument and control piping. Of particular importance are designs illustrating flared and flareless fittings. For high pressure service the flared fittings are in accord with Army-Navy Design 10061; for medium-pressure service they are in accord with SAE specifications. In the flareless fittings the gripping member bites into the outer surface of the tube, thus holding the tube against pressure, without appreciably distorting the inside tube diameter. The gripping member also forms a pressure seal against the body of the fitting.

A chart makes it easy to select tubing and fittings for any given set of conditions by tabulating the material and type of fittings suitable for different temperatures and pressures.

An unusual feature of the new Code is the service that has been set up to keep users informed of new data as it becomes available. A Coordinating Committee, under the chairmanship of Harvey A. Wagner, The Detroit Edison Company, has been set up to answer questions of interpretation and to keep track of new materials specifications. Throughout the Code, materials standards, tests, and specifications are referred to in general, without reference to any specific edition. Appendix 2 lists the edition of these standards in effect at the time the Code went to press. It will be the responsibility of the Coordinating Committee to keep track of new editions, and to issue a corrected list of current editions periodically, after approval by the committee.

When new materials come on the market, the Coordinating Committee will issue an analysis of the stress values and temperatures at which the material can be used under the Code.

This service will be available on a subscription basis. Details can be obtained from the American Society of Mechanical Engineers, which is sponsor for the Code and will operate the service.

Membership of the Coordinating Committee consists primarily of the chairman of each of the piping subsections of Sectional Committee B31.

After the solution to a question has been found by the Coordinating Committee or their opinion has been given, it will be submitted to the Executive Committee of Sectional Committee B31, and published by ASME in *Mechanical Engineering* as public notice. It will be put through the regular procedure of the American Standards Association to become a permanent part of the Code.

Standard Oil Co. (N. J.)

Eventually to carry oil from the Oklahoma oil fields to industrial centers, these pipes stretch for many miles across the prairies, ready to be placed in the trench.

Copies of the American Standard Code for Pressure Piping, B31.1-1951, are available at $3.50.

J. H. Courtney

With deep regret, the American Standards Association announces the death of John Howard Courtney, ASA Washington representative. Mr Courtney died March 8 in New Orleans, La., of a heart attack. He was one of the country's leading authorities on building code and construction standardization and was attending a meeting of the Joint Committee on Unification of Building Codes when he died. He was secretary of this committee.

Mr Courtney had taken a leading part in drafting building code standards and in negotiations leading to their implementation. He was technical secretary of the Building Code and Construction Standards Correlating Committee of ASA, which supervises and coordinates the work on standards in the building field carried on under ASA procedure. He also served as secretary for the following ASA committees on building code standards: Excavations and Foundations, A56; Minimum Design Loads in Buildings, A58; and Grandstands, Tents, and Other Places of Outdoor Assembly, Z20.

For several years Mr Courtney was secretary of the American Society for Testing Materials' Committee E-6 on Methods of Testing Building Constructions.

Prior to his employment by ASA, Mr Courtney was on the staff of the National Bureau of Standards. In that capacity he worked with the Department of Commerce Building Code Committee in preparing the committee's recommendations on building codes. He had had practical experience as superintendent of building construction for the George A. Fuller Company for six years, and as construction manager for Irwin and Leighton, Philadelphia.

Mr Courtney was the author of many technical papers, a member of the American Society of Civil Engineers, and an associate member of the Building Officials Conference of America.

Company Member Conference—May 22nd

Companies in the Midwest are particularly invited to be represented at the meeting of the ASA Company Member Conference May 22. The meeting will be held in the Main Auditorium of the Mechanical Engineering Building, University of Minnesota, Minneapolis-St. Paul. It is being sponsored by the Minnesota Chapter of the American Society of Mechanical Engineers with Lee S. Whitson as chairman.

The program will be as follows:

Presiding—W. P. Kliment, Engineer of Standards, Crane Company, Chicago, Ill.—Chairman, Company Member Conference

How ASA Functions—Vice-Admiral G. F. Hussey, Jr, (USN, Ret), Managing Director, American Standards Association

Standards for the Chemical Industry—J. G. Henderson, Standards Section, Department of Construction and Design, Carbide and Carbon Chemicals Company, South Charleston, W.Va.

Joint Industrial Conference Standards in the Electrical Hydraulic Field—L. A. Danse, Supervisor, Materials and Processes, Production Engineering, General Motors Corporation, Detroit, Mich.

The Work of the Standards Agency Relative to Military Specifications and Standards for the Armed Forces—Colonel A. E. Mickelsen, USA, Chief, Munitions Board Standards Agency, Washington, D. C.

Industrial Mobilization Planning—Vice-Admiral E. D. Foster (USN, Ret), Director of Mobilization Planning, Radio Corporation of America, Camden, N. J.

Standardization in Military Packaging—H. H. Loeffler, President, Exeter Paper Company, Chicago, Ill.

Robert Thomas, manager of Industrial Engineering, Minneapolis-Moline Implement Company, Minneapolis, is chairman of arrangements.

Proposed Federal Specifications

Listed below are proposed Federal Specifications which are still under development but have been published by the Federal Supply Services for procurement purposes before final promulgation. Comments will be welcomed by the Standards Division. Send to the Director, Standards Division, Federal Supply Service, General Services Administration, Washington 25, D. C.

Copies of these specifications can be consulted at the Library of the American Standards Association.

Title of Specification

2097 Fans, Electric, Air Circulators, Rigid Blades (Not for Marine Service)
2107 Bronze Pigment; Powder, for Gold Paint
2108 Acid; Butyric (Technical)
2109 Sodium Phosphates; Glassy (For Water Treatment Purposes)
2114 Heaters, Electric; Reflector, Portable (Bare Element)
2116 Acid, Stearic; Technical Grade
2118 Disinfectant; General Use
2122 Chloroform; Technical Grade
2123 Paradichlorobenzene (Dichlorobenzene, Para); Technical Grade
2125 Carbon Disulfide; Technical Grade
2126 Sodium Oxalate; Technical Grade
2128 Honey, Extracted
2129 Leather Dressing; Mildew-Preventive
2133 Sodium Sulfite (Anhydrous), Photographic Grade
2135 Copper Sulfate, Photographic Grade
2143 Potassium Metabisulfite, Photographic Grade
2145 Tire Retreading, Recapping, and Repairing
2146 Paper, Blotting
2149 Thermometers, Oven

Arbitration

(*Continued from page* 148)

similar group of lawyers tackled the same problem in commercial arbitrations. They have now presented a set of standards for Commercial Arbitration and a Code of Ethics and Procedural Standards for Labor-Management Arbitration which are receiving general acceptance throughout the country. They are unique in that they set standards for parties and arbitrators and administrators of rules so that cooperation is assured and one group of participants, such as arbitrators, is not rendered helpless by lack of cooperation from another group as, for example, the parties.[1]

Administrators' Rules

In these specifications for behavior, requirements for administrators of rules have been included. As an administered process, arbitration is nearly as old as the United States. Since the Chamber of Commerce of the State of New York became the first administrator of a private tribunal, hundreds of organizations have undertaken to formulate and administer rules—each according to the concept of its own trade or its organization. The specifications in these new codes undertake for the first time to establish a few basic principles for the guidance of all administrators so they also may help and not hinder fair behavior in an arbitration.

Trained Men Needed

Arbitration is at the point where its demand for trained men to serve as arbitrators is a paramount need. It no longer suffices that they know the subject matter; they must more competently know the process itself, for the issues involved are of a gravity hitherto unknown. For example, in a time of preparedness for defense, internal peace and security from labor disturbance is a grave necessity. But the training of men to serve as arbitrators, or of parties to appear in tribunals lies still in the nebulous area of conference and discussion. There has been no general acceptance of a recognized method of instruction, of the source material to be used in such instruction, of the equipment or knowledge teachers of arbitration might require. There is no history of arbitration. And, yet, without these, progress in the knowledge and application of arbitration must be vacillating and tenuous and ineffective. Here, also, progress is being made in putting forth standards for training in arbitration.[2]

How far should standardization go lest it stifle individual intiative and elasticity? In a time of comparative international peace, this question might be answered one way by imposing limitations upon standardization; in a time of national emergency, when any waste motion in the settlement of disputes becomes vital to defense, the answer might well be another way. Certainly in the chaotic state of world affairs, standardization assumes a new importance and could go much further without destroying its voluntary self-regulatory nature. Just as it has been found that uniformity in rules, codes, and clauses has not changed the basic character of arbitration nor affected its flexibility, so the further advancement of standardization may influence free people to make arbitration a way of life and an instrument of wide social service. Certainly it can do no harm to be more concerned with time limitations, more specific about costs, more intelligent about training, and more concerned with expedition in these perilous times.

[1] Texts are available on request to the American Arbitration Association.

[2] *Arbitration as an American and International Way of Life — A Project for Teaching Arbitration,* available from the American Arbitration Association.

Jubilee to Celebrate BSI's 50 Years

The British Standards Institution, pioneer among national standards associations, is celebrating its 50th Anniversary this year. The BSI Jubilee Week starting June 18 will be opened with an official reception given by H. M. Government at Lancaster House at which the President of the Board of Trade will receive BSI's guests. A banquet in honor of oversea guests, expected from 30 countries, is scheduled for June 20 at the Guildhall.

A special feature of the Jubilee program will be an exhibition at the Science Museum, South Kensington, London. Practically all the major industries that are using BSI's services are expected to take an active part.

Each industry will show how standards have simplified production, reduced costs, and maintained quality, and how they have benefited users of the products. Test apparatus designed to secure compliance with British Standards will be shown, together with many special exhibits. Among these will be features showing pictorially "What are standards?" and "How standards are prepared." The BSI information service on standardization throughout the world will also be illustrated.

The Exhibition will be opened at 11.30 A.M. June 18 by the President of the Board of Trade.

"As Britain was the first country to put industrial standardization on an organized basis nationally through the British Standards Institution, it is fitting that the first exhibition devoted to this subject should be staged in London—and during the national Festival year," the BSI comments in announcing the coming Jubilee festivities.

Visitors are also invited to attend the Annual General Meeting of the BSI Friday, June 22. BSI members will be present to meet them.

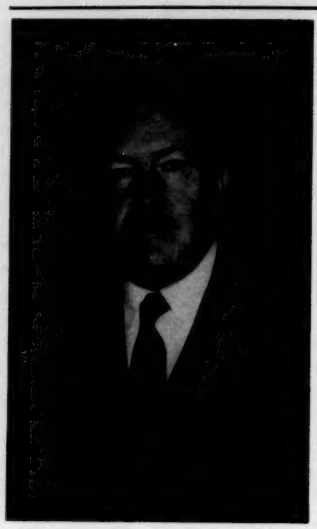
In the week preceding the Jubilee celebrations, the second Commonwealth Standards Conference is to be held in London. The Directors of nearly all the standards organizations in the Commonwealth have indicated that they will be present, and the agenda will cover important aspects of collaboration in standards work among the Commonwealth countries. The delegates will also take part in the Jubilee Week ceremonies.

Ordnance Association Joins ASA

ASA is glad to welcome as its newest Associate Member, the American Ordnance Association. The AOA has been particularly active in its program for building the country's potential armament capacity as a means of strength in peacetime and as a deterrent to war. Membership in the Association is open to American citizens, companies, and groups who are interested in advancing the knowledge of scientific and industrial preparedness. Nearly 32,000 individuals and more than 1100 companies are members. Foryt-five technical divisions and special committees of the Association serve as advisors to the Department of Defense on problems of quantity production of weapons and other armament. Members of these divisions and committees are Association members whose experience in World War II and leadership of private industry are of value to the armed forces. Because of their experience and training they are in a position to recommend practical solutions to armament-production problems.

Working models of new ordnance matériel are frequently submitted to these technical committees for advice and for solution of production problems. The models help committee members to visualize the tools and tooling required for most efficient mass production. One of the problems before them is standardization. As the Association explains, "The increasing mechanization of our Army, Navy, and Air Force, involving increased speeds of field operations, has imposed an almost impossible task on ordnance maintenance personnel throughout the Department of Defense. Greater attention must, therefore, be given to ease of maintenance, including greater accessibility and the mass utilization of standard parts and hardware wherever feasible."

Organized in 1919 as the Army Ordnance Association, the scope of the Association has been extended since World War II to include the other Services. Thus the Association has now become the "American" Ordnance Association.



Colonel James L. Walsh

The president of the American Ordnance Association is a graduate of the United States Military Academy who served in all grades of the Army, retiring as colonel, Ordnance Department, in 1922. He saw foreign service in Mexico, England, France, Belgium, Italy, and Austria. Colonel Walsh became first permanent Secretary of the Army Ordnance Association in 1922. He served as Director from 1922 through 1946, and as President from 1947 to date. He is vice-chairman of the National Technological Advisory Commission and is a member of ASME's Board on Public Affairs. Colonel Walsh was awarded the Distinguished Service Medal in 1918 and the Crozier Gold Medal of the Ordnance Association in 1941. He is founder and first editor of both Ordnance *magazine and* Logistics *magazine.*

All members of the national association also belong to one of the 34 Posts that keep the Association active in the local communities. General purpose of the Posts is to cultivate a more intimate understanding of ordnance subjects through meetings, plant visits, seminars, and reports on particular ordnance problems. Vice-Admiral G. F. Hussey, Jr, ASA's managing director, is president of the New York Post as well as a member of the Association's Council and of the General Committee on Aims and Organization.

One member from each of the local Posts makes up the elective Council. The Council also includes the three immediate past presidents, the national officers, and the national directors, as well as 15 members at large. The Board of Directors, the governing body of the Association is elected by the Council. The officers (president, 6 vice-presidents, executive vice-president, secretary, treasurer) are elected by the Board of Directors.

The Association keeps its members in touch with ordnance progress through several publications. *Ordnance* magazine, established 1920, is the bimonthly journal of the Association, the only magazine in the world devoted exclusively to scientific and industrial preparedness. *The Common Defense* is the title of the Association's monthly Washington newsletter. *Industrial Preparedness* is a monthly report on the activities of the Association's Technical Divisions and Committees and on other current industrial mobilization progress.

As a major principle, the Association emphasizes that its work for scientific and industrial preparedness stresses the importance of knowing who and where the men are with "know how", rather than solely what and where the machines are upon which the work will be done. "In the future our preparedness will be measured not alone in terms of machines and of things but in terms of men and of know how," it declares.

Standards From Other Countries

MEMBERS of the American Standards Association may borrow from the ASA Library copies of any of the following standards recently received from other countries. Orders may also be sent to the country of origin through the ASA office. The titles of the standards are given here in English, but the documents themselves are in the language of the country from which they were received.

For the convenience of our readers, the standards are listed under their general UDC classifications.

58 Botany

RUMANIA	STAS
Linden-Tree Flowers	936
Flower of Chamimile	937
Leaves of Digitalis	1074
Dried Rose Hips	1075
Leaves of Belladonna	1076
Dried Mint Leaves	1175

362.11 Hospitals, Infirmaries

POLAND	PN
Various Forms and Registers for Hospitals	Z 09009, 11/2/3,-35,-42,-46,-49/50,-54,-56,-61/2/3
Handy Rolling Table	Z 78022
Various Hospital Record Forms, such as Pregnancy Examination Forms, Childbirth Illness, Food order Forms, etc.	Z 09040,-09081,09093/8/9,-09100/8/12
7 Standards for Different Record Forms used in Hospitals	Z 09077,-82/3,-85/6,-88/9
19 Standards for Different Forms for Hospital Records	Z 09005,-10,-17,-21,-24/5,-58,-60,-64,-67,-71,-73/4/5/6,-78/9,-91/2

615.4 Medical and Surgical Furniture

GERMANY	DIN
Stretchers and Stretcher Wheel Carrier	13034

POLAND	PN
Various Surgical Instruments	Z 54063, 69, 57533,-36, 58010
Nineteen Standards for Various Stomatological Instruments	Z 56011,-51,-61/2/3,-67,-82,-84/5,-87,-90,-94/5/6,-115/6/7,-134,-137
Surgical Instruments: Stack's and Sichel's Probe, Axenfeld Scrapers	Z 57085,-57509/29/37
Ferguson's Speculum	Z 58006
Surgical Knives	Z 55020/1
8 Standards for Different Surgical Instruments	Z 54084,-86, 55002,-4,-6,-8,-111,-7

UNITED KINGDOM	BS
Hypodermic Syringes for Insulin Injection	1619:1950
Catheters (flexible urinary)	1695:1950
Hospital Bedsteads for General Purposes	1682:1950

616.3 Dentistry, Odontology

AUSTRALIA	AS
Dental Mercury	T.1-1949
Dental Amalgam Alloy	T.2-1949
Zinc Phosphate Cement for Dental Purposes	T.3-1949

POLAND	PN
5 Standards for Stomatological Instruments	Z 56006,-097,-099,-100,-135
Dentists Instruments	Z 56064/5/6
Dental Instruments: Double Scoop, Plugger, Excavator.	Z 56018,-56081/86

621.1 Steam, Steam Engines, Boilers

SPAIN	UNE
Locomotive Stay Bolts	25010
Locomotive Boiler Smoke Tubes	25012

UNITED KINGDOM	BS
Cold Drawn Electrically Welded Mild Steel Boiler and Super Heater Tubes	1678:1950
Valves, Gages and other Safety Fittings for Land Boiler Installations	759:1950

621.3 Electrical Engineering

FRANCE	NF
Modification of Rules for the Delivery of Transformers	C 6
Rules for Establishing Movable, not Permanent Connections to the Overhead Power Lines, Supplement 2	C 17,add.2
Rules for the Use of Electrodiagnostic Apparatus	C 109
Rules for the Installation of Radio Receivers	C 122

ISRAEL	SI
Electric Plug and Socket Outlet	32

SWEDEN	SEN
Voltage Tests	26-1950
Aluminum Conductors for Overhead Lines, Steel-Cored	38-1950

UNION OF SOUTH AFRICA	SABS
Specifications for electric cooking plates	154:1950
Specifications for polyvinyl chloride (p.v.c.) insulated electrical conductors	150:1950
Code of Practice for the testing of electricity meters	01:1948
Spec for fixed electric storage water heaters	151-1950

UNITED KINGDOM	BS
Bolted Flameproof Cable-Couplers Primarily for Use in Mines	912:1950
Tractive Armature Direct Current Neutral Track and Line Relays for Railway Signalling	1659:1950
Letter Symbols for Electronic Valves (Mainly for Use in Valve Catalogs and Similar Technical Literature)	1409:1950
Tractive Armature Direct Current Neutral-Polar Line Relays for Railway Signalling	519:1950
Electrically-Driven Point-Operating Machines for Railways	581:1950
Cartridge Fuse-Links for Use in Railway-Signalling Circuits	714:1950
Pressboard for Electrical Purposes	231:1950

621.5 Compressors

BELGIUM	NBN
Valves for Compressed Gas Cylinders	226-1950

SWEDEN	SIS
Code for Testing Reciprocating Compressors	37 00 01

UNITED KINGDOM	BS
Valves, Gages and Other Safety Fittings for Air Receivers and Compressed Air Installations	1123:1950
Pneumatic Tools and Accessories	673:1950
Electrical Refrigerators and Food Freezers for Household Use in All Climates	922:1950
Electrical Refrigerators and Food Freezers for Household Use in Temperate Climates Only	1691:1950

621.6 Apparatus for Conveyance and Storage of Gases and Liquids, Conduits and Pumps

ISRAEL	SI
Method of Testing Borehole of Centrifugal Pumps	30

NEW ZEALAND	NZSS
Water Taps ½ in. to 1 in.	625

UNITED KINGDOM	BS
Wrought Steel Pipe for the Petroleum Industry	1600-1607:1950
Flanged Automatic Control Valves for the Petroleum Industry (face-to-face dimensions)	1655:1950
Steel Pipes and Tubes for Pressure Vessels for Use in the Chemical and Allied Industries	1507;1508:1950

621.7 Soldering, Welding, Cutting

AUSTRIA	ÖNORM
Preparation of Test Pieces from Base Metals	M 3053

CANADA	CSA
Moisture Vapor Barrier (Protective Packing)	Z 102.1-1950

POLAND	PN
Steel Forging—Design Tolerances and Positioning	H 94300/1,-94303
Accuracy in Surface Finishing	M 04250

UNITED KINGDOM	BS
Steel Filler Rods for Gas Welding of Mild Steel	1453:1950
Paper Boxes for Pills, Tablets, Ointments, Pastes, Creams, Powders and Crystals	1679:1950
Mild Steel Drums (Heavy Duty Fixed Ends)	1702:1950
Paste Polish Tins	1680:1950
Vernier Height Gages	1643:1950
Vernier Callipers	887:1950

Aluminum Electrodes for Metal-Arc Welding	1616:1950
External Micrometers	870:1950
Mild Steel Drums (Light Duty—Fixed Ends)	814:1950

621.8 Means of Attachment

NETHERLANDS	N
Acme Screw Thread for Diameters from 10 to 80 mm	364
Acme Screw Thread for Diameters from 90 to 280 mm	365
Split Cotter Pins	1607

POLAND	PN
Different Kinds of Nails	M 81001/2-/5/7/8/9/11-/15/21/24/26

SWEDEN	SMS
Keyways for Parallel Keys in Shafts and Hubs	31
Parallel Keys	695
Four-way Pallets	71 00 01
Two-way Pallets on Skids or Legs	71 00 02

UNITED KINGDOM	BS
Wrought Iron Chain Slings	781:1950
Gin Blocks	1692:1950

621.9 Machine Tools, Tools, Operations, in Particular for Metal or Wood

CHILE	INDITECNOR
Testing Sieves	2.4|4

POLAND	PN
Half-Round Chisels	D 54443
Plane Iron	D 54671
Morse and Metric Taper Shanks for Machine Tools, Hand Tools, Chucks and Apparatus	M 55011
Pin Twist Drills	M 59680
Taper Adaptors for Milling Cutters, 7:24 Taper	M 60151/2
Chuck with Morse Taper Shank for Straight Shank End Mills	M 60155
Spring Collet for Straight Shank Mills	M 60158
Arbor with Morse Taper Shank for Milling Cutters	M 60221
Lathe Centers, 60°	M 60611
Self-Centering Chucks. Dimensions	M 60651
Different Chuck Plates, etc., for Lathes	M 60652
Rubber Scrapers	B 61036
Jigs and Clamp Plates	M 61222
Adjustable Wrench with Knurled Handle	M 64975
Taps for Pipe Threads	M 57925
Nuts for Milling Cutter Chucks	M 60156
Extension Arbor for Taps	M 60225
Reduction Sockets for 7:24 Taper	M 60555
Tool-holders, Details	M 61223
Beton Mixers	I 57001
Gas-Pipe Pliers	M 64475
Straight Edge	N 55004
Plane Cutting Iron	D 54671

SWEDEN	SIS
T-Slot, Finished	82
Straight Hand-and Machine Reamers	814 thru 820
Slitting Saws	916/7/8
Slotting Cutters, Side and Face Cutter	919/0
T-Slot Cutters	921/2
Plain Milling Cutters	923
Angle Cutters	924/5/6
Convex and Concave Cutters	927/8
Jig Locks	948
Tubular Bow Saw Frames	1444
Plane Irons	1484/5

UNITED KINGDOM	BS
Twist Drills and Centre Drills	328:1950
Industrial Perforated Plates	1669:1950
Self-holding Tapers	1660:Part 1:1950

622.3 Special Kind of Mining

RUMANIA	STAS
Oil Drilling Equipment. Sucker Rod Coupling	906
Oil Field Equipment. Polished Rod Clamps	907
Oil Drilling Equipment. Drilling Bit, Narrow	910
Oil Drilling Equipment. Regulator for Oil-Gas Separators	911
Oil Drilling Equipment. Oil-Gas Separator, Types and Dimensions	913
Oil Drilling Equipment. Safety Valve for Oil-Gas Separator	914
Oil Drilling Equipment. Cementing Head	956
Oil Drilling Equipment. Stuffing Box for Polished Rods	976
Oil Drilling Equipment. Sucker Rod, Hooks	997/8/9
Oil Drilling Equipment. Rotary Hose	1062
Oil Drilling Equipment. Reduction Tubing Head	1065
Oil Drilling Equipment. Shock Absorber for Mud Pump	1109
Stuffing Box	1110
Oil Drilling Equipment Cement Mixer	1149
Oil Drilling Equipment. Cable Sockets	1150
Oil Drilling Equipment. Pipe Clamps	1152

624 Civil Engineering

AUSTRIA	ÖNORM
Calculation of Admissible Load for Steel Constructions	B 4300 Part 4

FRANCE	NF
Door Frames, Wooden, Plain	P 23-401
Paneled Doors, Wooden, Different Types	P 23-440/1/2

GERMANY	DIN
Structures of Glass and Reinforced Concrete	4229
Light Partitions	4103
Insulation of Buildings from Ground Moisture	4117
Specification for Clay or Mud Buildings	18951,B1.1,2
Light Steel Structures Specifications for Admissible Loads, etc.	4115

NEW ZEALAND	NZSS
Conditions of Tender and General Conditions of Contracts for Civil Engineering Work	623

POLAND	PN
Different Kinds of Flooring Materials	B 06150-06155
Steel Window Frames	B 92000
Wooden Windows for Dwellings	B 1601
Double Window Frames Structural Details	B 1616/7
Double Window, Polish Type, Structural Details	B 1621/2
Swedish Type Windows, Structural Details	B 1626
Classification of Sawed Oak Lumber	B 96002
Fire-proof Doors for Dwellings	G 60005/6/7, 60011/2/3
Section Wooden Retaining Wall	G 60401

RUMANIA	STAS
Wooden Windows for Industrial Buildings	469
Wooden Windows and Doors	799

628.2 Sewers

BRAZIL	IPT
Asbesto-Cement Pipes for Sewer	92

GERMANY	DIN
Sewer Covers for Flush Installation in Gardens, etc.	1232
Two Types Concrete Traps	1236,B1.1,2

RUMANIA	STAS
Sludge Trap of Concrete	1240

629.12 Ships and Shipbuilding

FRANCE	NF
Method of Installing Washbasins and Tanks	J 35-542

NETHERLANDS	N
Shackles, D-Type	964

POLAND	PN
Adjusting and Trust Rings for Cargo Handling Beams	W 82061/2
Fair-Leads, General Table of Types	W 89010
Fair-Leads, General Assembly	W 89034
Fair-Leads, Details	W 89054-89083,-89096,-89129
Bollards, Different Types	W 89101,-89111,-89116
Cargolifting Tackle, such as Swivels, Eyebolts, Hooks, Shackels, etc.	W 89191/2/3/5/9/204/210
Ship Derrick Parts, such as Bearings, Pivots, Pins, etc.	W 89281/2 3/4/5/90/1/2/4

SPAIN	UNE
Fair-leads, Different Types	27022/3
Anchor Chains, General Specification	27100
Diameters of Steel Bars for Ordinary Links	27110
Diameters of Steel Bars for Heavy and Extra Heavy Links	27111
Different Forms of Links	27120
Shackles	27130
Connecting Demountable Chain Links	27140

629.13 Aeronautics, Aircraft Engineering

FRANCE	NF
Standard Forms and Dimensions of Screw Necks	PN L 004 22
Aluminum Alloy Equal Angle Sections	EN L 090 16.1
Aluminum Alloy Unequal Sections	EN L 090 17.1
Aluminum Alloy Channels	EN L 090 18.1
Aluminum Alloy Tees	EN L 090 19.1
Non-ferrous Alloy Hexagon Bars	EN L 090 43
Non-ferrous Alloy Strips	EN L 090 52.1
Metal Cables and Fittings	PN L 170 20 thru PN L 170 24
Hexagon Castle Nuts, Low	PN L 176 15.2[a]
Hexagon Nuts, High and Low	PN L 176 15.4[a]
Hexagon Castle Nuts, High	PN L 176 15.5[a]

POLAND	PN
Aviation Spark Plugs, Not-Shielded	L 76000
Aviation Spark Plugs, Shielded Type and Gaskets	L 76001/2/3
Shielding Sleeves for Ignition Wires	L 76009
Bushing for the Shield of Ignition Cable	L 76011
Aircraft Conduits. Pipe Bores	L 02651

More Decisions on Unusual Injuries

The following interpretations have been handed down by the Committee of Judges of ASA Sectional Committee Z16 on accident statistics. They serve as a guide to companies who want to know how to count injuries due to unusual accidents in their safety record.

The American Standard Method of Compiling Industrial Injury Rates, Z16.1-1945, offers generally accepted rules for keeping track of a company's safety record. Monthly compilation of a company's accident toll shows at a glance when some change in operations or some unforeseen new hazard has caused a jump in the injury rate. Immediate action then can be taken to eliminate the hazard.

Safety engineers are invited to obtain interpretations of the standard by sending the facts on doubtful cases to the American Standards Association. Reprints of all the published decisions can be obtained from ASA.

CASE 85. A middle-aged woman employed in an office had a past medical history of treatments for a cancerous condition which had affected her bone structure. From the time she was hired she had been gradually failing in health. She had been under medical surveillance for a considerable time. Her equilibrium had been difficult and her reflexes very slow. Because of this condition, she was given a simple routine job in a clerical capacity.

On the day in question she had left her desk to place a small folder on a nearby cabinet. She started to turn, according to her own statement, and lost the power in her left leg to sustain herself, and suddenly collapsed to the floor with a resultant fracture of the left femur.

The conditions of the floor area were excellent, no object to cause her to fall was evident, and the probable cause for this injury was definitely attributed to her physical condition, as she had stated herself.

This employee had been retained on active duty because of her financial status, for humanitarian reasons only, due to her inability to obtain employment elsewhere.

The company made a complete investigation. The fall occurred from a normal standing posture for no apparent external physical reason. She did not slip or trip over any object. In falling she did not hit anything except the floor.

While the committee agreed that this case was very close to the borderline, the members did not believe that it should be included in the injury rates. This decision was based on the belief that while the injury occurred in the course of employment it did not arise out of the employment in any way.

CASE 86. On Monday, July 25, at 2:30 A.M., employee "H" sustained a scratch on the right tibia while on duty. He first reported his injury on Tuesday, July 26, at 7:00 A.M. On Thursday, July 28, "H" was transferred to the day shift, so that he might visit the nurse for treatment, which he did on July 28 (three visits) and on Friday, July 29 (three visits).

On Friday, July 29, due to a decrease in the production schedule, "H" was laid off.

On Monday, August 1, "H" presented himself at the plant and was requested to visit one of the company's doctors. "H" did not do so. On Tuesday, August 2, "H" again visited the plant nurse, who made an appointment for him to visit one of the company's doctors at 2:00 P.M. that day. "H" failed to keep his appointment with the doctor that day, later claiming that he had made an airplane trip with a friend. On the same evening, Tuesday, August 2, he went to his family physician who hospitalized him, at 7:00 P.M. for an infected leg. He remained in the hospital until 11:00 A.M. Friday, August 5, when he was discharged.

In the meantime, the production schedule was increased and "H" was requested to report for work Monday morning, August 8. He did not do so because of illness, not connected with the injury, but did resume work Tuesday morning, August 9.

It was the plant's contention that this should not be charged as a lost-time accident for the following reasons:

1. Because of reduced production schedule, "H" was on lay off at the time he was hospitalized and this lay off was in no way connected with his injury.
2. Because "H" neglected treatment of his leg, even to his failure to keep an appointment with the company doctor.

The committee decided that the injury should be considered an industrial injury, and therefore should be included in the rates. The committee called attention to the fact that the code makes no provision for excluding a case on the grounds that the employee did not avail himself of the medical services provided. It also recalled that in paragraph 3.4.1 it is specifically stated that disability on any one or more days, including Sundays, days off, and plant shut downs, is to be included, if the employee was unable to work on these days because of his injury.

(CASE 87 omitted—it was hypothetical: no decision)

CASE 88. An employee pushed a piece of air hose, that was lying on the floor, out of his way by a normal movement of the left foot. Immediately after the incident he reported a soreness in his left knee. The plant physician diagnosed it as a median meniscus of the left knee and confirmed his diagnosis by x-ray. He then recommended an operation. The employee entered the hospital on Sunday, July 24 and returned to work on September 6.

The company did not believe that this case should be counted in a regional safety contest because:

1. There was no possible way to prevent the injury.
2. The injury was not caused by an unsafe act on the part of the employee.
3. The injury was in no way caused by any negligence of the company.
4. The physical condition of the employee no doubt contributed to the injury.

The committee indicated that in accordance with the American Standard Method of Compiling Industrial Injury Rates, Z16.1-1945, the case cited should be counted as a lost-time injury and should be shown in rates kept in accordance with this American Standard.

The members of the committee pointed out that they are only making interpretations of American Standard Z16.1-1945 and are in no way saying whether this, or any other case, should or should not be counted in a contest.

CASE 89. An injury sustained by an employee in a plant was classified as a temporary partial disability by the doctor. A disability assignment was available for the injured. He worked at this assignment for two days and then did not appear for work for several days. The reason he gave for being absent from work was that:

1. The doctor advised him not to drive his own car,
2. The man with whom he normally could ride worked on another shift, and,
3. Public transportation, though available, was not desirable because it would get him to work late in the morning and return him a little later than usual in the evening.

The question was: "Should this case be considered as a temporary total disability for the three days on which he did not appear for work?"

The committee agreed that this case was very close to the borderline, but finally came to the conclusion that this injury should not be counted in the rates. It was felt that this employee could have come to work for at least part of the time, but did not do so because of the inconvenience of public transportation.

CASE 90. A number of employees in a plant were exposed for a short time to noxious gases or fumes from some undetermined location outside of the plant (from some other manufacturer's plant in the area). The chemical composition of the gases or fumes was unknown, but from the description it appeared that they might have been sulfur dioxide or something of that nature. Several men were examined by the company doctor, who could find nothing in particular wrong.

The company asked: "If any of these men had subsequently been disabled as the result of this exposure, would the cases be considered as temporary total disability and, therefore, chargeable in the frequency rates?" The nature of the men's work in the plant was such that there would never be any incident of the kind described arising out of their work.

The members of the committee stated that as far as the information submitted was concerned, they believed that this case should be counted. They remarked, however, that it was very difficult to pass judgment on any hypothetical case and they would therefore handle each case on its own merits, rather than to try to make any decision on a hypothetical case.

CASE 91. An employee in a textile mill twisted his left knee while working. The nature of the employee's work was such that he had to stand and turn continually, twisting his knee in the process of his work. The man reported to his overseer that his knee hurt but he had not struck his knee to his knowledge. He was sent to a local doctor for an examination and the report stated that he had water on the knee. This doctor referred the patient to a specialist who examined him and stated that the nature of his work, that is twisting, could cause water on the knee. There were, therefore, two doctors' reports stating that the nature of his work could cause water on the knee. The specialist put this man's knee and leg in a cast so that he was unable to work and was not able to return to work until approximately November 1. The accident happened on August 1. It was brought out during a safety meeting that since there was no actual accident the company did not believe it should be charged with a lost-time injury.

The Committee of Judges believed that this case should be counted, on the basis that, in accordance with the medical opinion submitted, there appeared to be evidence that this injury occurred in the course of and arose out of employment.

CASE 92. While an employee was pushing an empty "ware" car, a sharp burr on the car punctured his right thumb. An abscess formed on the thumb. The injury occurred just prior to a curtailment program at the plant. The employee could and would have been permitted to work had not his job been abolished through the curtailment program, since the injury amounted only to a puncture of the finger.

The employee said he was going to work on his farm following the lay off, but the doctor felt that this type of work might be injurious to the puncture wound.

The employee would have been working had not the curtailment taken place. The work the employee normally did at the plant would not have been injurious to him, whereas work on the farm which the plant could not control would have been.

The employee was given workmen's compensation benefits and group insurance benefits for 32 days, beginning with the date of curtailment. His doctor's fees and x-rays, and surgery expenses were paid out of workmen's compensation.

Should this case be considered a lost-time injury?

The committee decided that this injury, as reported, should be counted as a temporary total disability, on the basis that there was no job that this man could perform that was open and available to him in the plant in which he was injured. The time charges should be the actual days lost, in this case 32 days.

CASE 93. An employee inspecting tumblers and packing them into cartons lost her balance on the edge of the selecting platform (just a few inches off the floor), slipped, and sprained her ankle. The doctor's diagnosis was "sprain of external lateral ligament of left ankle with swelling, discoloration, pain, and tenderness."

Before this diagnosis was made, however, the employee was hospitalized for 36 hours for observation. The accident happened at about noon on a Thursday. She went to the hospital Thursday and remained there for 36 hours, thus losing one full working day. Saturday and Sunday were her regular off days. On Monday she returned to work.

As it turned out, her injury was so minor that she could have worked on Friday had she not been in the hospital under observation.

Should this be counted as a lost-time injury?

The committee agreed that this should be counted as a temporary total disability. In commenting on this case the members pointed out that there are only three classes of injuries to which the "hospitalization for observation" clause applies: (*a*) a blow on the head, (*b*) a blow to the abdomen, and (*c*) an inhalation of harmful gases known to have a delayed effect. There was apparently no evidence that the hospitalization in this case was for any of these three conditions. It would also appear that this girl lost one additional day on account of the injuries, after the end of the 48-hour observation period.

CASE 94. A distillery asked if the following hernia case should be included in the rates:

The employee's job involved the handling of both full and empty barrels in the Barrel Receiving or Dump Room. (A full barrel of whiskey weighs approximately 450 pounds, while the empty barrel weighs approximately 100 pounds.) The full barrels are rolled in from the adjacent Regauge Room, and are either up-ended and stored in the Barrel Receiving or rolled onto the dump trough for emptying into the blending tanks. The empty barrels are then loaded onto tracks or railroads cars for shipment. It is significant that, even in up-ending these barrels, a "rocking" motion is used and it is necessary for an experienced man to exert but very little effort in actual lifting.

As stated above, one phase of this employee's job was to roll full barrels onto the dump trough, remove the bung, and empty the whiskey into the trough, where it flows to the blending tanks. The barrels are rolled over the concrete floor and up a slight raised steel ramp (rails) forming the sides on the trough. It is necessary to keep the barrels aligned straight on the rails of the trough in order for the bung to empty properly.

Employee alleged he was engaged in this job when, in attempting to straighten the barrel on the trough, he noticed a slight "burning sensation" in his right groin. He further stated that he had not noticed exerting any more pressure on the barrel than usual and that while he was aware of the "slight burning sensation," it was not acute and quickly subsided. He said he had noticed this same feeling on previous occasions and therefore paid no attention to it. He specifically stated that he did not stop work, even momentarily, as the pain was not that acute, and only reported

(*Continued on page* 166)

What's New on American Standard Projects

Reinforced Concrete, A89—

Sponsor: American Concrete Institute

A proposed revision of the American Standard Building Code Requirements for Reinforced Concrete (ACI 318-47), A89.1-1948, has just been ratified by the American Concrete Institute at its annual meeting. The revision will be submitted to ASA for approval.

This revision permits higher bond stresses in reinforced concrete in which the new-type reinforcing bars meeting ASTM A305 are used. The revised code is being published in the April issue of the *AIC Journal.*

Safety Code for the Use, Care and Protection of Abrasive Wheels, B7—

Sponsors: Grinding Wheel Institute; International Association of Governmental Labor Officials

R. N. S. Merritt, The Norton Company, is the new secretary of the B7 sectional committee.

Dimensional Standardization of Bolts, Nuts, Rivets, and Similar Fasteners, B18—

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

A proposed revision of American Standard on Round Unslotted Head Bolts, prepared by subcommittee 5 on this subject, is being circulated to members of Committee B18 for comment and criticsm.

Safety Code for Conveyors and Conveying Machinery, B20

Sponsors: American Society of Mechanical Engineers; Association of Casualty and Surety Companies, Accident Prevention Department

A letter ballot of the sectional committee regarding a change in the title of the B20 committee, and a revision of the scope has been completed and approved by the sponsor. These changes have been submitted to ASA and have since been approved by the Safety Code Correlating Committee.

The proposed change in the title reads "Safety Code for Conveyors and Related Equipment." The chief proposed revision in the scope specifies that the code "does not apply to industrial power trucks, tiering machines, cranes, derricks, hoists, power and hand shovels, bucket drag lines, moving stairways, dumbwaiters, manlifts, and platform elevators designed to carry passengers or the elevator operators." These subjects are being handled by separate sectional committees, and the change in scope has been for the purpose of clarification.

Wire and Sheet Metal Gages, B32—

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

The Chemical Industry Correlating Committee voiced its sentiments on the proposed revision of American Standard Preferred Thicknesses for Uncoated Thin Flat Metals, B32.1-1941, by voting that:

The CICC favors the adoption of a schedule of preferred thicknesses specified in decimal values.

I. V. Williams, chairman of B32, wrote an article (STANDARDIZATION, October 1950) outlining the new standard and asking for comments and criticisms on the proposed revision. The CICC's action is in answer to this request.

Classification and Designation of Surface Qualities, B46—

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

A proposed American Standard on physical specimens of surface roughness and lay is being circulated for letter ballot approval of Committee B46. Two types of specimens are included in this proposal. The first type is intended for precision reference of roughness height in checking calibration of instruments for measuring surface roughness, and not for visual or tactual comparisons. The second type is intended to illustrate commonly used machined surfaces embracing a range of roughness values and methods of manufacture. It is to be used for determining roughness specifications and for control of surface roughness where visual and tactual comparisons are adequate.

Storage and Handling of Anhydrous Ammonia and Ammonia Solution, K61—

Sponsor: Compressed Gas Association

Organization of a project on storage and handling of anhydrous ammonia and ammonia solutions has just been approved by the Safety Code Correlating Committee. This project was recommended at a recent conference of groups concerned with the manufacture, distribution, and use of this chemical. The Conference was called as a result of a request from the Compressed Gas Association. The CGA has been approved as sponsor for the project under the procedure of the American Standards Association.

The scope of the project as approved by ASA covers: "Safety standards pertaining to the design, construction, location, installation, and operation of anhydrous ammonia systems, and transportation and storage of anhydrous ammonia, and ammonia solutions, but not pertaining to ammonia manufacturing plants, refrigerating or air conditioning systems."

The thirty-two organizations to be invited to participate in the work of this project are:

Agricultural Ammonia Institute
American Society of Agricultural Engineers
American Society of Mechanical Engineers
American Municipal Association
American Society of Refrigerating Engineers
American Trucking Association
American Institute of Chemical Engineers
American Society of Safety Engineers
American Water Works Association
Associated Factory Mutual Fire Insurance Companies
Association of Casualty and Surety Cos, Accident Prevention Dept
Bureau of Explosives
Building Officials Conference of America, Inc.
Bureau of Labor Standards, U.S. Department of Labor
Compressed Gas Association, Inc.
Council of State Governments
Department of the Army
Department of the Navy, Bureau of Ordinance
Department of Agriculture

Federal Interdepartmental Standards Council
International Association of Government Labor Officials
Interstate Commerce Commission, Bureau of Motor Carriers
Interstate Commerce Commission, Bureau of Service
Manufacturing Chemists' Association, Inc.
National Association of Mutual Casualty Cos
National Board of Fire Underwriters
National Council of Private Motor Truck Owners
National Fire Protection Association
National Safety Council
Refrigeration Service Engineering Society
Synthetic Organic Chemical Manufacturers Association
U.S. Coast Guard

Rayon Fabrics, L22—

Sponsor: National Retail Dry Goods Association

A plan for the use of the American Standard Certification Mark of the American Standards Association on rayon fabrics has just been sent to letter ballot of Committee L22. It will serve as a recommendation to producing, distributing, servicing, and consumer organizations. Developed by a special subcommittee, the plan is now before the same committee that developed the proposed American Standards for Rayon Fabrics.

The Certification Mark, a distinctive pattern incorporating the letters "AS," is intended as a guarantee that the materials or commodities on which it is stamped or applied on a label meet an applicable "American Standard." In this case it would be the proposed American Standards for Rayon Fabrics.

The plan for rayon fabrics certification contains a program for testing, sampling, examination, and reexamination of fabrics to determine conformity with the standard.

The success of such a certification plan hinges on the integrity, impartiality, and thoroughness of a certifying agency. In order to accomplish this, the plan calls for the organization of a voluntary, independent certifying agency composed of representatives of the following interests whether they be associations or individual concerns: rayon yarn producers; griege goods manufacturers; converters; chemical producers; dyers, printers, and finishers; garment manufacturers; wholesalers; distributors (retailers, mail order houses, etc); testing laboratories; launderers and dry cleaners; and consumers.

The agency would license organizations which desire to enter into contract for the use of the "AS" Certification Mark. This mark can be used together with any other insignia, trade mark, or other method of identification of product.

This plan provides for the use of labels distinctive in color. For a "washable" class the color would be green, for "careful washing" it would be yellow, and for a "dry-cleanable" class it would be red. The plan also states that such labels should be permanently attached to garments and articles so as to provide the consumer, cleaner, dyer, and launderer with information indicating the class to which they belong.

Manufacturers and distributors may state that their products meet an American Standard without certification as outlined in the plan. Such reference may be made on their own responsibility. Only products that have been certified in accordance with the plan outlined can qualify for identification by labels, in advertising, and in promotion material as "certified" and be entitled to use the American Standard certification mark "AS." The use of the mark, however, does not relieve the manufacturer or distributor from any responsibility in regard to misrepresentation or fraudulent statements concerning the goods so marked.

Approval Requirements for Gas Burning Appliances, Z21—

Sponsor: American Gas Association

At a meeting of this committee March 8, the following action was taken:

Gas Water Heaters—The committee approved revisions to the present American Standard Approval Requirements for Gas Water Heaters, Z21.10-1949. These revisions apply to automatic storage type heaters intended to deliver water at the outlet at a temperature in excess of 160 F.

Electrical Components—Approval was also given to a complete set of requirements for testing electrical equipment and wiring used on many domestic gas appliances. Electrical inspectors have been raising questions on electrical equipment on gas burning appliances in instances where this equipment does not bear the Underwriters' label. Discussions with interested officials have brought out that, while gas burning appliance requirements appeared adequate, there were no methods of test to indicate how compliance with certain of the major provisions was determined.

The adoption of test methods now clears the way for inspectors to approve gas appliances bearing the AGA seal alone, thus eliminating the necessity for running tests in separate laboratories. Such testing of all appliances having electrical components will be instituted immediately by the AGA Laboratories to permit certification of appliances to local authorities.

These test methods will be incorporated in revised editions of American Standards relating to domestic gas ranges, unit heaters, and central heating gas appliances and submitted to ASA for approval.

A completely revised edition of American Standard Listing Requirements for Automatic Pilots, Z21.20-1940 R1947 was also approved for submission to ASA.

Standardization in the Field of Library Work and Documentation, Z39—

Sponsor: Council of National Library Associations

Reorganization of the Z39 committee on standardization in library work and documentation took place at a meeting, April 6, at ASA headquarters.

The committee is sponsored by the Council of National Library Associations under the procedure of the American Standards Association. Temporary chairman is Miss Janet Doe, Librarian, New York Academy of Medicine, representing the Medical Library Association. Ralph H. Phelps, director of the Engineering Societies Library, representing the Association of College and Reference Libraries, is acting secretary.

Scope of the work as outlined at the meeting will be: Standards for concepts, definitions, terminology, letters and signs, practices, methods, supplies and equipment used in the field of library work and the preparation and utilization of documents.

Reports from the International Organization, ISO TC/46 on Documentation were discussed. The committee asked the ASA to make arrangements with the ISO for it to participate in the international work.

Appointment of subcommittees was authorized to survey what has already been done in the U. S. and by ISO and to make recommendations on what action the new committee should take on the following:

Abbreviations for titles of periodicals; Transliteration of Cyrillic characters; Presentation of reference material in indexes, abstracts, periodicals and other serials; Title references for literature; Sizes of index cards, slips, and other forms of documentation; Library statistics.

Organizations represented at the meeting were:

American Library Association
Association of American Library Schools
American Theological Library Association
American Documentation Institute
Music Library Association
Library of Congress
Special Libraries Association
Council of National Library Associations (sponsor)
Catholic Library Association
National Research Council
Association of College and Reference Libraries

Mortimer Taube, Atomic Energy Commission, and Mrs Eileen R. Cunningham, Vanderbilt University Medical School, attended as members at large.

Safety Code for the Industrial Use of X-rays, Z54—

Sponsor: National Bureau of Standards

The American War Standard Safety Code for the Industrial Use of X-rays, Z54.1-1946, has been widely distributed and used throughout industry by those employing x-rays and gamma-rays for other than medical purposes. This document has proven to be a valuable source of information in planning the protective measures and procedures for industrial x-ray installations. This safety code, prepared under wartime pressure, was considered as tentative. Moreover, since its inception, there has been a radical change in the concept of the permissible dosage rate. There have also arisen a number of new problems and applications requiring specific treatment.

The task of revising and amplifying the tentative War Standard has been undertaken by a newly formed sectional committee under the sponsorship of the National Bureau of Standards and having a wide representation. An initial meeting of this committee was held at ASA headquarters on March 7, at which time the scope of the work was considered. Out of the discussions, it developed that the diverse needs of industry and management would be better served by a series of short, specific codes in the general area of industrial radiation safety than by one all-embracing code. This approach would facilitate the work of the committee, be less costly to the consumer, and would provide for easy future revision. The committee agreed that the following specific areas should be treated in separate codes:

1. Industrial Radiography and Fluoroscopy. (This would cover most of the material of the present Z.54.1 X-Ray Safety Code.)
2. Use and Application of Electron Tubes
3. Use of Radioactive Static Eliminators.
4. Use of X-Rays and Radioactive Materials for Caging Purposes
5. X-Ray Diffraction and Fluorescence Analysis
6. Non-medical Irradiation of the Human Body
   (a) Fluoroscopic Shoe Fitting
   (b) Anti-theft and Anti-sabotage
7. Use of X-Ray and Electron Beams for Sterilization in Industrial Processing

Work on the first topic, Industrial Radiography and Fluoroscopy, was given priority, and the organization of subcommittees for this task is now under way. Correspondence concerning the work of this committee should be directed to the sectional committee chairman, Dr Scott W. Smith, Chief, Radiological Equipment Section, National Bureau of Standards, Washington 25, D. C.

Reported by Scott W. Smith, Chairman, Z54

Home Cooking and Baking Utensils, Z61—

Sponsor: American Home Economics Association

Coffee and tea makers, and pressure sauce pans are being included in a proposed revision of the American Standard for Home Cooking and Baking Utensils, Dimensions, Tolerances, and Terminology, Z61.1-1949, according to discussion at a meeting of Z61, March 14.

As a result of this meeting, specifications will be drafted for these utensils and circulated to members of the committee for study, comment, and approval.

As a basis for these specifications the committee adopted standard definitions for both coffee and tea makers.

A coffee maker is defined as: "A utensil in which coffee is prepared and from which it may or may not be served. It is usually equipped with one handle, a spout or pouring lip, and a cover. The capacity shall be stated in cups, the basis of which is 5½ ounces of finished brew; i.e., a coffee maker with a 6-cup capacity shall deliver 33 ounces plus or minus 5 percent."

The definition for a tea maker is substantially the same. However, the last sentence is changed to read, "A capacity shall be stated in cups, the basis of which is 5½ ounces of finished brew plus or minus 5 percent."

• • **The U. S. viewpoint on international proposals** for textile standards will be unified by a special committee organized March 13. William Appel, National Bureau of Standards, and R. E. Hess, secretary of the American Society for Testing Materials, were named chairman and secretary respectively of this committee. The committee expects to have recommendations available for discussion at the meeting of ISO/TC 38 on Textiles at Bournemouth, England, June 4-9.

AMERICAN STANDARDS

Status as of April 6, 1951

Legend

Standards Council — Approval by Standards Council is final approval as American Standard; usually requires 4 weeks

Board of Review—Acts for Standards Council, gives final approval as American Standard; usually requires 2 weeks

Correlating Committees — Approve standards to send to Standards Council or Board of Review for final action; approval by correlating committee usually takes 4 weeks

Arbitration

Submitted to ASA for Approval—

Standards for Commercial Arbitration
Sponsor: American Arbitration Association

Building

American Standards Just Approved—

Specification for Structural Clay-Bearing Wall Tile ASTM C34-50; ASA A74.1-1951 (Revision of ASTM C34-49; ASA A74.1-1950)

Specifications for Structural Non-Load-Bearing Tile ASTM C56-50; ASA A76.1-1951 (Revision of ASTM C56-49; ASA A76.1-1950)

Specifications for Structural Clay Floor Tile ASTM C57-50; ASA A77.1-1951 (Revision of ASTM C57-49; ASA A77.1-1950)

Methods of Sampling and Testing Brick ASTM C67-50; ASA A82.1-1950 (Revision of ASTM C67-44; ASA A82.1-1944)

In Board of Review—

Specifications for Gypsum (Revision of ASTM C22-41; ASA A49.1-1941)

Methods of Testing Gypsum and Gypsum Products (Revision of ASTM C26-42; ASA A70.1-1942)

Specifications for Gypsum Plasters (Revision of ASTM C28-40; ASA A49.3-1940)

Specifications for Gypsum Wall Board (Revision of ASTM C36-42; ASA A69.1-1942)

Specifications for Gypsum Lath (Revision of ASTM C37-42; ASA A67.1-1942)

Specifications for Gypsum Molding Plaster (Revision of ASTM C59-40; ASA A49.4-1940)

Specifications for Keene's Cement (Revision of ASTM C61-40; ASA A66.1-1941)

Specifications for Gypsum Sheathing Board (Revision of ASTM C79-42; ASA A68.1-1942)

Sponsor: American Society for Testing Materials

In Correlating Committee—

Preparation of Subfloors to Receive Oxychloride Composition Flooring, A88

General Purpose Oxychloride Composition Flooring and Its Installation, A88

Heavy Duty Oxychloride Composition Flooring and Its Installation, A88

Oxychloride Composition Basecoat Flooring and Its Installation, A88

Sponsors: National Bureau of Standards; American Society for Testing Materials

Method of Making and Curing Concrete Compression and Flexure Test Specimens in the Field (ASTM C31-49; Revision of ASA A37.17-1948)

Method of Test for Compressive Strength of Molded Concrete Cylinders (ASTM C39-49; Revision of ASA A37.18-1948)

Method of Test for Organic Impurities in Sands for Concrete (ASTM C40-48; Revision of ASA A37.19-1948)

Methods of Securing, Preparing and Testing Specimens from Hardened Concrete for Compressive and Flexural Strengths (ASTM C42-48; Revision of ASA A37.20-1948)

Method of Test for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading) (ASTM C78-49; Revision of ASA A37.22-1948)

Method of Test for Compressive Strength of Concrete Using Portions of Beams Broken in Flexure (Modified Cube Method) (ASTM C116-49; Revision of ASA A37.24-1948)

Method of Test for Amount of Material Finer Than No. 200 Sieve in Aggregates (ASTM C117-49; Revision of ASA A37.-4-1943 R 1948)

Method of Measuring Length of Drilled Concrete Cores (ASTM C174-49; Revision of ASA A37.31-1948)

Method of Test for Penetration of Bituminous Materials (ASTM D5-49; Revision of ASA A37.1-1930 R 1948)

Definition of Terms Relating to Materials for Roads and Pavements (ASTM D8-49; Revision of ASA A37.33-1948)

Method of Sampling Stone, Slag, Gravel, Sand and Stone for Use as Highway Materials A37.75 (ASTM D75-48; Revision of ASA A26-1930)

Specifications for Calcium Chloride (ASTM D98-48; Revision of ASA A37.37-1948)

Method of Testing Emulsified Asphalts (ASTM D244-49; Revision of ASA A37.-42-1948)

Method of Float Test for Bituminous Materials (ASTM D139-49; Revision of ASA A37.2-1930 R 1948)

Recommended Practice for Bituminous Mixing Plant Inspection (ASTM D290-49T; Revision of ASA A37.43-1948)

Methods of Sampling and Testing Calcium Chloride (ASTM D345-48; Revision of ASA A37.44-1948)

Specification for Asphalt Plank (ASTM D517-50; Revision of ASA A37.48-1948)

Method of Test for Sulfonation Index of Road Tars (ASTM D872-48; Revision of ASA A37.59-1948)

Specification for Emulsified Asphalt (ASTM D977-49—formerly D631-46; Revision of ASA A37.55-1948)

Specification for Ready-Mixed Concrete (ASTM C94-48; ASA A37.69)

Method of Test for Air Content of Freshly Mixed Concrete by the Pressure Method (ASTM C231-49T; ASA A37.70)

Method of Test for Specific Gravity of Road Oils, Road Tars, Asphalt Cements and Soft Tar Pitches (ASTM D70-27; ASA A37.71)

Method of Test for Specific Gravity of Asphalts and Tar Pitches Sufficiently Solid to be Handled in Fragments (ASTM D71-27; ASA A37.72)

Method of Test for Distillation of Cut-Back Asphaltic Products (ASTM D402-49; ASA A37.45)

Reaffirmation Requested—

Method of Test for Toughness of Rock (ASTM D3-18; ASA A5-1930—to be ASA A37.73)

Specifications for Materials for Cement Grout Filler for Brick and Stone Block Pavements (ASTM D57-29; ASA A31-1924—to be A37.74)

Specifications for Sieves for Testing Purposes (ASTM E11-39; ASA Z23.1-1939)

Sponsor: American Society for Testing Materials

Submitted to ASA for Approval—

Pile Foundations and Pile Structures, A96
Sponsor: American Society of Civil Engineers

Chemicals

American Standard Just Approved—

Methods of Chemical Analysis of Yellow, Orange, Red, and Brown Pigments Containing Iron and Manganese ASTM D50-50; ASA K44-1951 (Revision of ASTM D50-36; ASA K44-1937)

Sponsor: American Society for Testing Materials

Electrical

American Standards Just Approved—

Sampling Electrical Insulating Oils, Method of Test (ASTM D923-49; ASA C59.-21-1951)

Power Factor and Dielectric Constant of Electrical Insulating Oils of Petroleum Origin, Method of Test (ASTM D924-49; ASA C59.22-1951)

Gas Content of Insulating Oils, Method of Test (ASTM D831-48; ASA C59.23-1951)

Inorganic Chlorides and Sulfates in Insulating Oils, Method of Test (ASTM D878-49; ASA C59.24-1951)

Detection of Free Sulfur in Electrical Insulating Oils, Method of Test (ASTM D981-48T; ASA C59.25-1951)

Natural Block Mica and Mica Films Suitable for Use in Fixed Mica-Dielectric Capacitors, Specification for (ASTM D-748-49; ASA C59.26-1951)

NEMA Standards for Laminated Thermosetting Products C59.16-1951 (Revision of C59.16-1949)

Method of Testing Sheet and Plate Materials Used in Electrical Insulation ASTM D229-49; ASA C59.13-1951 (Revision of ASTM D229-46; ASA C59.13-1948)

Sponsor: American Society for Testing Materials

Audiometers for General Diagnostic Purposes, Z24.5-1951

Sponsor: Acoustical Society of America

Rolled Threads for Screw Shells of Electric Lamp Holders and Lamp Bases, C81.1-1951

Dimensional and Electrical Characteristics of 4-Watt T-5 Preheat Start Fluorescent Lamp, C78.400-1951

Dimensional and Electrical Characteristics of 6-Watt T-5 Preheat Start Fluorescent Lamp, C78.401-1951

Dimensional and Electrical Characteristics of 8-Watt T-5 Preheat Start Fluorescent Lamp, C78.402-1951

Dimensional and Electrical Characteristics of 14-watt T-12 Preheat Start Fluorescent Lamp, C78.403-1951

Dimensional and Electrical Characteristics of 20-Watt T-12 Preheat Start Fluorescent Lamp, C78.406-1951

Dimensional and Electrical Characteristics of 15-Watt T-8 Preheat Start Fluorescent Lamp, C78.404-1951

Dimensional and Electrical Characteristics of 30-Watt T-8 Preheat Start Fluorescent Lamp, C78.407-1951

Dimensional and Electrical Characteristics of 85-Watt T-17 Preheat Start Fluorescent Lamp, C78.409-1951

Dimensional and Electrical Characteristics of 40-Watt T-12 Preheat Start Fluorescent Lamp, C78.408-1951

Dimensional and Electrical Characteristics of 100-Watt T-17 Preheat Start Fluorescent Lamp, C78.410-1951

Dimensional and Electrical Characteristics of 42-Inch T-6 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.801-1951

Dimensional and Electrical Characteristics of 64-Inch T-6 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.803-1951

Dimensional and Electrical Characteristics of 72-Inch T-8 and Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.-805-1951

Dimensional and Electrical Characteristics of 96-Inch T-8 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.807-1951

Dimensional and Electrical Characteristics of 20-Millimeter 52-Inch Cold-Cathode Fluorescent Lamp, C78.1100-1951

Dimensional and Electrical Characteristics of 20-Millimeter 64-Inch Cold-Cathode Fluorescent Lamp, C78.1101-1951

Dimensional and Electrical Characteristics of 20-Millimeter 84-Inch Cold-Cathode Fluorescent Lamp, C78.1103-1951

Dimensional and Electrical Characteristics of 20-Millimeter 76-Inch Cold-Cathode Fluorescent Lamp, C78.1102-1951

Dimensional and Electrical Characteristics of 8-Watt T-5 Bactericidal Lamp, C78.-1200-1951

Dimensional and Electrical Characteristics of 15-Watt T-8 Bactericidal Lamp, C78.-1201-1951

Dimensional and Electrical Characteristics of 20-Millimeter 93-Inch Cold-Cathode Fluorescent Lamp, C78.1105-1951

Dimensional and Electrical Characteristics of 30-Watt T-8 Bactericidal Lamp, C78.-1202-1951

Dimensional and Electrical Characteristics of 30-Watt Bactericidal Lamp, C78.1202-1951

Sponsor: Electrical Standards Committee

National Electrical Code, C1-1951 (Revision of C1-1946 and C1a-1949)

Sponsor: National Fire Protection Association

In Correlating Committee—

Dimensional and Electrical Characteristics of 32-Watt T-10 12-Inch Circular Fluorescent Lamp, C78.413

Dimensional and Electrical Characteristics of 40-Watt T-12 Instant-Start Fluorescent Lamp, C78.600

Dimensional and Electrical Characteristics of 48-Inch T-12 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.808

Dimensional and Electrical Characteristics of 40-Watt T-17 Instant-Start Fluorescent Lamp, C78.601

Dimensional and Electrical Characteristics of 72-Inch T-12 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.809

Dimensional and Electrical Characteristics of 96-Inch T-12 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.810

Sponsor: Electrical Standards Committee

Highway Traffic

In Board of Review—

Railroad Highway Grade Crossing Protection, D8.1 (Revision of D8.1-1943)

Sponsor: Association of American Railroads

Mechanical

American Standards Just Published—

Code for Pressure Piping, B31.1-1951 (Revision of B31.1-1942) $3.50

Sponsor: American Society of Mechanical Engineers

Transmission Roller Chains and Sprockets, B29.1-1940 (Revision of B29.1-1930) $3.00

Inverted Tooth (Silent) Chains and Sprocket Teeth, B29.2-1950 $2.00

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

American Standards Just Approved—

Specifications for Zinc Coated (Galvanized) Iron and Steel Sheets ASTM A93-50T; ASA G8.2-1951 (Revision of ASTM A93-48T; ASA G8.2-1949)

Specifications for Seamless Copper Water Tube ASTM B88-50; ASA H23.1-1951 (Revision of ASTM B88-49; ASA H23.1-1949)

Specifications for Brass Wire ASTM B134-50; ASA H32.1-1951 (Revision of ASTM B134-49; ASA H32.1-1949)

Specifications for Leaded Red Brass (Hardware Bronze) Rods, Bars, and Shapes, ASTM B140-50; ASA H33.1-1951 (Revision of ASTM B140-49; ASA H33.1-1949)

Sponsor: American Society for Testing Materials

Malleable Iron Screwed Fittings, 300 Lbs, B16.19-1951

Sponsors: American Society of Mechanical Engineers; Heating, Piping, and Air Conditioning National Association; Manufacturers Standardization Society of the Valve and Fittings Industry

In Board of Review—

Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe, B36.20 (Revision of ASTM A120-46; ASA G8.7-1947)

Sponsor: American Society for Testing Materials

Steel Butt-Welding, B16.9 (Revision of B16.9-1940)

Sponsors: American Society of Mechanical Engineers; Manufacturers Standardization Society of the Valve and Fittings Industry; Heating, Piping, and Air Conditioning Contractors' National Association

Drill Drivers, Split-Sleeve, Collet Type, B5.27

Sponsors: American Society of Mechanical Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; Society of Automotive Engineers

Inspection of Fine Pitch Gears, B6.11

Sponsors: American Society of Mechanical Engineers; American Gear Manufacturers Association

In Correlating Committee—

Tolerances for Ball and Roller Bearings, B3.5

Terminology and Definitions for Anti-Friction Ball and Roller Bearings and Parts, B3.7

Sponsor: Mechanical Standards Committee

Mining

American Standard Just Approved—

Tumbler Test for Coke ASTM D294-50; ASA K20.3-1951 (Revision of ASTM D294-29; ASA K20.3-1936)

Sponsor: American Society for Testing Materials

Motion Picture

In Correlating Committee—

Cutting and Perforating Dimensions for 32-mm on 35-mm Motion Picture Negative Raw Stock, PH22.73

Zero Point for Focusing Scales on 16-mm and 8-mm Motion Picture Cameras, PH22.74 (Revision of American War Standard Z52.51-1946)

Mounting Threads and Flange Focal Distances for Lenses on 16-mm and 8-mm Motion Picture Cameras, PH22.76 (Re-

vision of American War Standard Z52.50-1946)

Sponsor: Society of Motion Picture and Television Engineers

Optics

In Board of Review—

Method of Spectrophotometric Measurement of Color, Z58.7.1 (Revision of Z44-1942)

Method for Determination of Color specifications, Z58.7.2 (Revision of Z44-1942)

Alternative Methods for Expressing Color Specifications, Z58.7.3 (Revision of Z44-1942)

Sponsor: Optical Society of America

Petroleum Products and Lubricants

American Standards Just Published—

Method of Test for Butadiene Content of Polymerization Grade Butadiene, ASTM D973-50; ASA Z11.66-1950 $.25

Method of Oxidation Stability of Lubricating Greases by the Oxygen Bomb Method, ASTM D942-50; ASA Z11.65-1950 $.25

Method of Test for Existent Gum in Gasoline (Air-Jet Evaporation Method) ASTM D381-50; ASA Z11.36-1950 $.25

Heat of Combustion of Liquids by Bomb Calorimeter, ASTM D240-50; ASA Z11.-14-1950 $.25

Sponsor: American Society for Testing Materials

Photography

In Correlating Committee—

Dimensions for Film Pack, Z38.1.1 (Revision of Z38.1.1-1941 and Z38.1.2-1941)

Dimensions for 35-mm Magazine Film (For Miniature Cameras), Z38.1.49 (Revision of Z38.1.49-1948)

Dimensions of Photographic Double Film Holders of the Lock-Rib Type, Z38.1.51

Dimensions of 16-mm 100-ft Film Spool for Recording Instruments and Still Picture Cameras, Z38.1.52

Dimensions of 16-mm 200-ft Film Spool for Recording Instruments and Still Picture Cameras, Z38.1.53

Dimensions of 35-mm 100-ft Film Spool for Recording Instruments and Still Picture Cameras, Z38.1.54

Dimensions of 70-mm 100-ft Film Spool for Recording Instruments and Still Picture Cameras, Z38.1.55

Sponsor: Optical Society of America

Safety

In Board of Review—

Safety Code for Installing and Using Electrical Equipment in and About Coal Mines, M2.1 (Revision of M2-1926)

Sponsors: American Mining Congress; Bureau of Mines, U. S. Department of Interior

New Project Initiated

Anhydrous Ammonia and Ammonia Solutions

Sponsor: Compressed Gas Association

Accidents

(Continued from page 160)

it the next day when he noticed a slight swelling in the right groin. It is also significant to note that when the employee was eventually hospitalized for surgical repair, the surgeon operated on not only the right side, but also the left as the inquinal wall on the uninjured side was weakened to such an extent that he felt it advisable to repair it at the same time.

The committee agreed that this case should not be counted in the rates. Although some of the members considered that this hernia might be of industrial origin, they agreed that in accordance with the history presented, there was not sufficient pain in the hernia region to stop work even momentarily and it therefore did not meet the requirements for counting a hernia, in accordance with the standard.

CASE 95. A textile company reported that a cotton card operator was injured. From all the information they could obtain, this employee fainted or blacked out, and fell, striking his head against the card, causing a slight brain concussion. He was unconscious for several hours and lost five days from work. The doctor treated him for lacerated wounds of the head and chin and a brush burn of the left forearm. The employee's wife stated that he had not been feeling well for the past week and he had been having dizzy spells. The company stated, "since this accident was not caused by carelessness or unguarded machinery, we do not feel this accident should be counted against our records as a lost-time accident."

The committee agreed that this case should be counted in the rates. Some of the members called attention to previous decisions in Cases No. 50 and 75. The committee agreed that although the primary cause of the injury might have been the fainting spell, the circumstances surrounding the man's employment contributed to the severity of the injury and, therefore, the injury should be considered as reportable and included in the rates.

• • **Building Standards**—Recommendations that the American Standards Association study ways to speed development of building standards for emergency use were made by the Building Code and Construction Standards Correlating Committee, March 16. The committee foresaw that scarcity of materials might necessitate rapid changes in American Standard specifications. Speed in changing American Standard requirements to meet such emergency situations would help to maintain the procedures in which the viewpoints of all groups concerned are given consideration in the opinion of the committee. The recommendation is being submitted to ASA's Standards Council.

Announcement was made that a uniform plumbing code, intended to be submitted as a revision of American Standard Plumbing Code approved in 1949, has been completed by the Coordinating Committee on Plumbing. This committee[1] is under the chairmanship of Dean Dawson, College of Engineering, University of Iowa, with Vincent T. Manas, Department of Commerce, Construction Section, as secretary.

A report of this group harmonizes minor variations and requirements among existing plumbing codes. These include the Uniform Plumbing Code (issued by the Housing and Home Finance Agency in 1947); the plumbing code issued by the Western Plumbing Association some years ago; recommendations on plumbing contained in the plumbing code of the Building Officials Conference of America (issued in 1950); and the present American Standard Plumbing Code, A40.7-1949. The sponsors for ASA project A40 on plumbing are now canvassing all organizations interested in building to learn whether the proposed revised code will be widely accepted.

A new recommended building code for small homes, the first of its kind, is being completed by the New York State Building Code Commission for circulation and possible adoption by all cities and villages in New York State. Officials of the Commission indicate that in so far as possible its present code, and any future work on a general building code, should be based on standards and on work of agencies engaged in development of recognized, model codes.

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[1] The following organizations are members: American Public Health Association, American Society of Mechanical Engineers, American Society of Sanitary Engineering, Building Officials Conference of America; Conference of State Sanitary Engineers, National Association of Master Plumbers, Uniform Plumbing Code Committee, Western Plumbing Officials Association; and as cooperating agencies, the Housing and Home Finance Agency, U.S. Department of Commerce, and the U.S. Public Health Service.

News Briefs

• • **Canadian Approvals Laboratories**—The Approvals Division of the Canadian Standards Association has moved its entire operations into its own building in Toronto. Formerly, the Fire Hazards Branch had been in Ottawa, with the Research Laboratories and the Testing Equipment, Office Equipment, and Personnel in two separate buildings in Toronto. CSA announces that the new organization will include the most complete oil burner and furnace testing laboratory in Canada.

The Approvals Division was started in 1940 as a national authority for testing and certifying electrical equipment and appliances as to whether they can be safely used without danger of electric shock or fire. Since that time the service has been extended to other products.

With the new organization, the Division has informed Provincial and Federal departments of Canada that it is ready to extend the Laboratory Service to include testing and certification of electrical equipment for use in coal mines. CSA accepts "Flame-proof" or "Explosion-proof" certification only as at present carried out in England (Buxton) and the United States (Pittsburgh). "To have this service available in Canada would be a great stimulus and convenience to Canadian manufacturers in producing this equipment for Canadian mines and other locations with explosive atmospheres," the *CSA News* comments. "The key to this extension of service by the Approvals Division is, of course, the acceptance, by all Provinces, of CSA certification when available. Subcommittees have already been formed to develop and write standard specifications to cover this type of equipment."

Reorganization of the Approvals Division to give the director specific responsibilities and authority, and to provide a Technical Advisory Committee for each branch of the approvals work has also been announced by J. G. Morrow, chairman of the Canadian Standards Association. The services of these technical committees will be available to organizations submitting a product for approval. Among their duties will be adjudication of any appeal against the withholding of approval on a device. Better and faster service to the inspection departments of all provinces and to the manufacturers is anticipated, Mr Morrow explains.

A cooperative arrangement between the Canadian Standards Association and the British Standards Institution for testing and approval of electrical equipment intended for export to Canada is in full operation. One of the CSA Approvals Division's senior engineers has just returned from England after working for nine months with British industry on this program.

• • **Binney Appointed by B S I**—The British Standards Institution has announced the appointment of H. A. R. Binney, C. B., as Director and Secretary. Mr Binney has been trained both as a Mechanical Engineer and as an Electrical Engineer. Before he joined the staff of the B S I as Deputy Director under Mr Percy Good, he held the position of Undersecretary of the British Board of Trade.

• • **Transmission Chains** — Two American Standards on transmission chains, one new and one revised, have just been published.

The standard on Transmission Roller Chains and Sprocket Teeth, B29.1-1950, is a revision of the 1930 edition. It contains new and additional data on minimum ultimate strength specifications; designation of multiple strand chains; standard ¼ and 2¼ inch pitch standard chains; roller link widths; transverse pitch of sprockets; sprocket tooth section profiles; caliper diameter formula; formula for maximum hub and groove diameters of sprocket; data on hob design; and two sprocket tooth designs, with tolerances on important dimensions. These latter designs are classified as Type I, with pitch line clearance, and Type II, without pitch line clearance. The required cutter designs for these types are also provided. In addition, two major changes have been made in the standard. The recommended maximum rpm of sprockets has been changed and a table for these values has been added. Also, tables for the power transmission capacity ratings of the fourteen standard roller chains have been added.

The American Standard Inverted Tooth (Silent) Chains and Sprocket Teeth, B29.2-1950, is the new standard just published It contains sections on silent chain nomenclature; sprocket tooth form; formulas for calculating sprocket diameters; sprocket diameter tolerances; maximum hub diameters; sprocket tooth hardness; standard diameters of sprockets; general chain proportions and designations; sprocket face dimensions and chain widths; and supplementary information on silent chain sprocket cutter data, silent chain sprocket hob data, and recommended horsepower capacity tables.

Both of these standards were developed under ASA procedure by sectional committee B29, on Transmission Chains and Sprockets, sponsored by the American Society of Mechanical Engineers and the Society of Automotive Engineers.

Copies of the American Standard Transmission Roller Chains and Sprocket Teeth, B29.1-1950, and American Standard Inverted Tooth (Silent) Chains and Sprocket Teeth, B29.2-1950, may be obtained from either the American Standards Association or the Society of Automotive Engineers. American Standard B29.1-1950 is $3.00 a copy; B29.2-1950 is $2.00.

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